

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	1	20

INDEX OF SHEETS

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19	DETAIL SHEET
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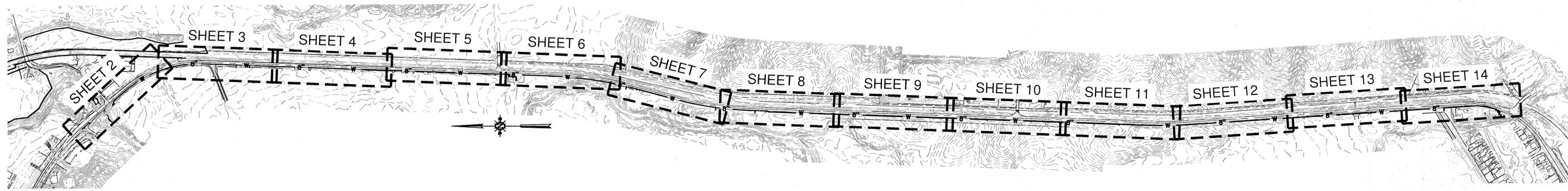
**SAN LUIS OBISPO COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
UTILITIES DIVISION**

**PLANS FOR THE CSA 23/AMWC/GARDEN FARMS CWD
EMERGENCY INTERTIE PROJECT
SANTA MARGARITA, CA
CONTRACT NO. 300536**

To Be Supplemented By State Standard Plans Dated May, 2006.

APPROVED: 13 APR, 20 15
[Signature]
WADE HORTON, DIRECTOR OF PUBLIC WORKS
RCE 64,745

APPROVED: 4/8/2014
[Signature]
DEAN BENEDIX, UTILITIES DIVISION MANAGER
RCE 37,892

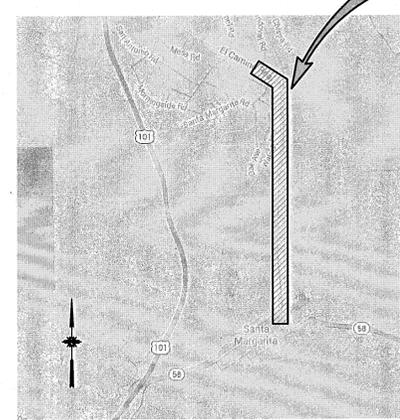


LEGEND

EXISTING	PROPOSED	
PROPERTY LINE	P/L	AIR RELEASE VALVE
RIGHT-OF-WAY	ROW	AC
FENCE	X	ASPHALT CONCRETE
EASEMENT		BC
FLOWLINE		CL
CONTOURS		DCDA
WATER MAIN	W	D.I.
SANITARY SEWER LINE	SS	D.I.P.
STORM DRAIN LINE	SD	EC
GAS LINE	G	EP
ELECTRIC LINE	E	ETW
OVERHEAD WIRES	OH	FG
COMMUNICATION	COMM	FS
DCDA		FLG
WATER VALVE		FDC
WATER METER		FL
GAS METER		GB
FIRE HYDRANT		HP
PG&E BOX		INV
TRANSFORMER		LT
MONUMENT		MJ
STORM DRAIN INLET		PE
CURB INLET		POC
FIRE DEPARTMENT CONNECTION		PL
POWER POLE		PUE
FOUR-WAY SIGN		ROW
TWO-WAY SIGN		RT
SDMH		STA
SSMH		
		CONCRETE
		DECOMPOSED GRANITE

LOCATION MAP

SCALE HORIZ 1"=300'



VICINITY MAP

NTS

PROJECT LOCATION

BASIS OF BEARING

THE BASIS OF BEARINGS FOR THIS PROJECT IS THE BEARING BETWEEN THE FOUND AERIAL PANEL AP-9 (#5290) AND THE FOUND AERIAL PANEL DESIGNATED AP-11 (#529), ESTABLISHED BY CANNON CORPORATION FOR THE COUNTY OF SAN LUIS OBISPO'S NACIMIENTO WATER PROJECT, ACCORDING TO THE SURVEY CONTROL MAP DATED 4/30/07 AND HAVING A BEARING OF N 6°12'49" W.

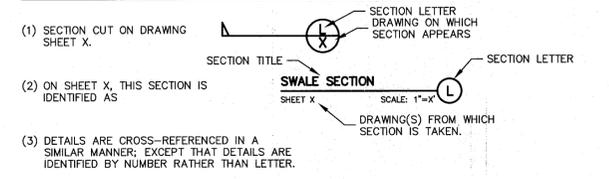
BENCHMARK

- THE BENCHMARKS HELD FOR THIS PROJECT ARE:
- AP-9 (#5290) ELEVATION = 1004.78' FOR POINTS AT #5234 AND LYING SOUTHERLY THEREOF.
 - BRASS CAP AT POINT #5233, STAMPED "A 1095 1968" PID FV0176 AND HAVING A NAVD 88 ELEVATION OF 983.47' PER THE NGS DATA SHEET, FOR POINTS AT #5174 AND NORTHERLY THEREOF.
 - WATER VALVE LID (#4881) HAVING AN ELEVATION OF 937.06' AS SHOWN ON THE SHEET "C-TOPO34" FOR THE NACIMIENTO WATER PROJECT, FOR POINTS AT #5139 AND NORTHERLY THEREOF.

LICENSE REQUIREMENTS

The successful bidder shall possess a Class A general engineering contractor's license at the time this contract is awarded. In the alternative, the successful bidder shall possess a specialty contractor's license at the time this contract is awarded that permits the successful bidder to perform with his or her own organization contract work amounting to not less than 30% of the original total contract price and to subcontract the remaining work in accordance with Section 8-1.01, "Subcontracting," of the Standard Specifications.

SECTION AND DETAIL NUMBERING SYSTEM



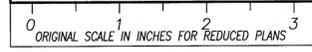
SURVEY NOTES:

- TOPOGRAPHIC MAPPING PREPARED BY GOLDEN STATE AERIAL SURVEYS, INC. BETWEEN JULY 2005 AND APRIL 2006. SUPPLEMENTAL FIELD TOPO PERFORMED BY COUNTY OF SAN LUIS OBISPO IN 2014.
- THE RIGHT-OF-WAY SHOWN ON THESE PLANS ARE APPROXIMATE AND DO NOT REPRESENT A BOUNDARY SURVEY.

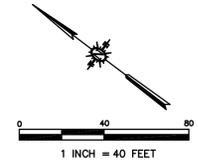
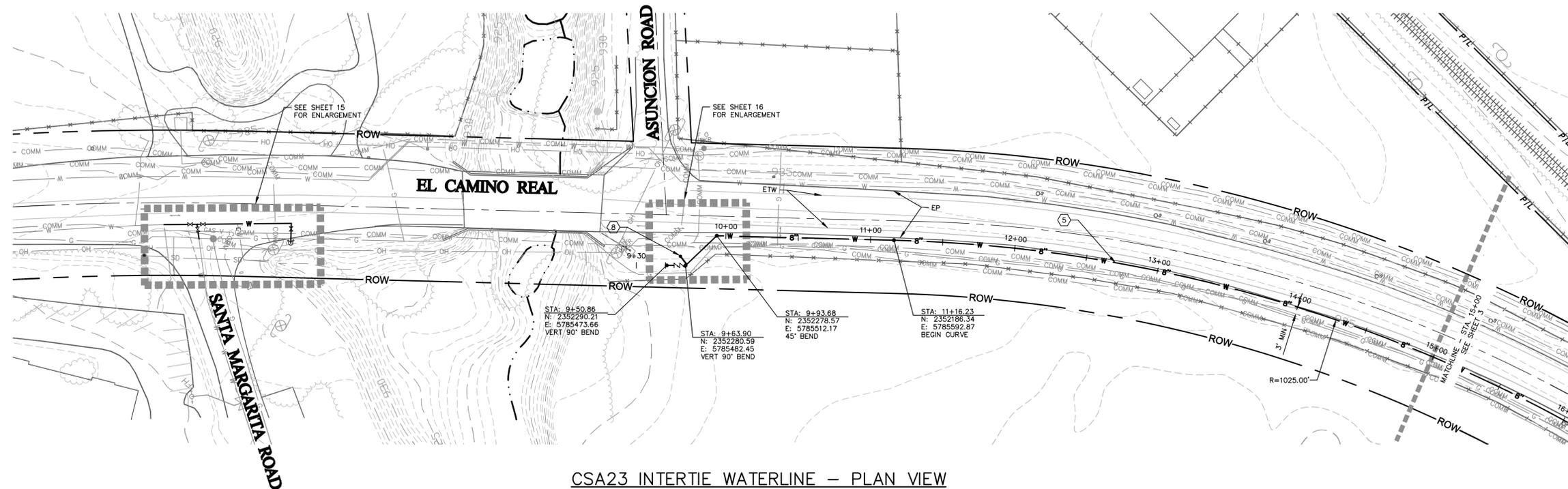


CSA23 INTERTIE IMPROVEMENTS					
TITLE SHEET					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
<i>[Signature]</i>	JT	2/17/15	JT	2/17/15	CG

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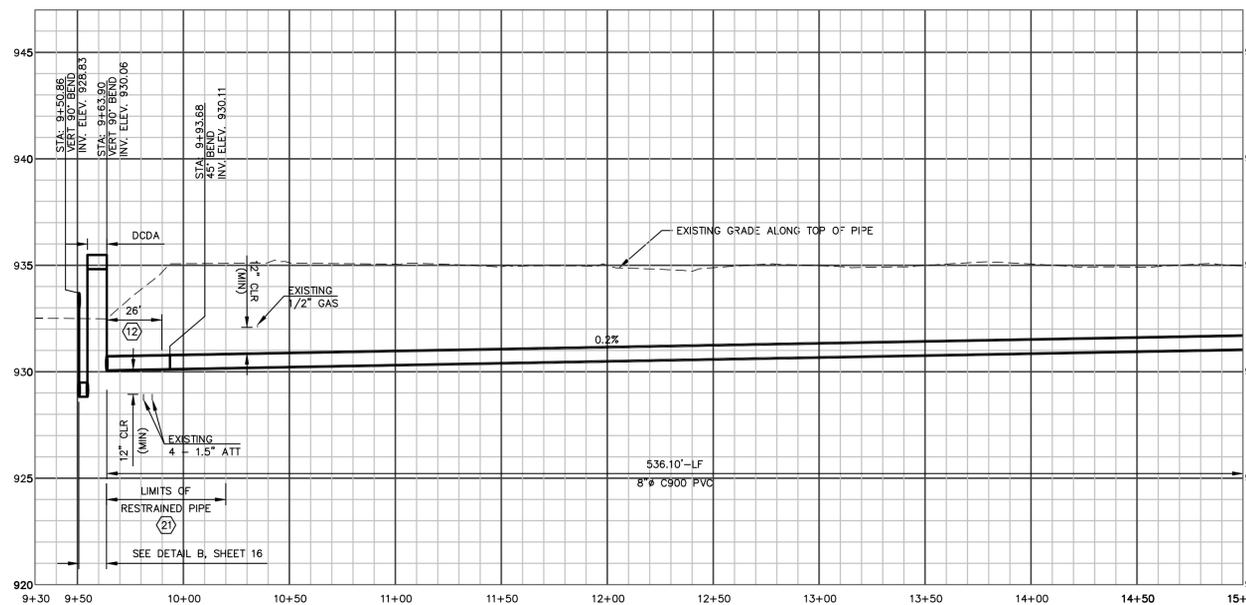
CSA23 INTERTIE WATERLINE – PLAN VIEW
SCALE HORIZ 1"=40'

GENERAL NOTES

- LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND BASED ON AVAILABLE INFORMATION PROVIDED BY UTILITY COMPANIES. IN INSTANCES WHERE NO VERTICAL UTILITY INFORMATION COULD BE FOUND, THE DEPTH OF THESE UTILITIES ARE SHOWN THREE FEET BELOW GROUND SURFACE.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL POthOLE AND VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR SHALL USE POSITIVE LOCATION METHODS PER CALTRANS PUBLICATION – "POLICY ON HIGH AND LOW RISK UNDERGROUND FACILITIES WITHIN HIGHWAY RIGHTS OF WAY"
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF THE DISCOVERY OF ANY UTILITY THAT WAS OMITTED FROM THE PLANS, INCORRECTLY SHOWN OR NOT PROPERLY MARKED. IF THE UTILITY COMPANY DOES NOT PROVIDE LOCATION INFORMATION OR MARKING SERVICES IN THE FIELD, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- OVERHEAD UTILITIES ARE NOT SHOWN IN ALL INSTANCES. CONTRACTOR SHALL USE DUE CARE WHEN WORKING NEAR OR UNDER SAID UTILITIES AND SHALL PROTECT THEM IN PLACE.
- THE CONTRACTOR SHALL NOT INTERRUPT THE UTILITY SERVICE FUNCTION, DISTURB THE SUPPORT BASE, OR MODIFY ANY FACILITY WITHOUT AUTHORITY FROM THE UTILITY OWNER.
- EXISTING PIPELINES/UTILITIES THAT CROSS NEW SYSTEM PIPING OR SIMILAR EXCAVATIONS REQUIRED TO CONSTRUCT THE PIPING, SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED. ALL EXISTING PIPELINES/UTILITIES SHALL BE SUPPORTED ACROSS THE EXCAVATION DURING CONSTRUCTION.
- INTERFERING PORTIONS OF ABANDONED UTILITIES SHALL BE REMOVED AND DISPOSED OF AS UNSUITABLE MATERIAL BY THE CONTRACTOR. THE CUT ENDS SHALL BE PLUGGED WITH BRICK AND MORTAR OR CONCRETE. THE CONTRACTOR SHALL VERIFY THAT THE UTILITY IS TRULY ABANDONED PRIOR TO REMOVAL.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER IF ANY UTILITY IS DISTURBED OR DAMAGED DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BEAR THE COSTS OF REPAIR OR REPLACEMENT OF ANY MARKED UTILITY WHERE DAMAGE WAS CAUSED BY THE CONTRACTOR'S ACTIVITIES.
- WATERLINE SHALL MAINTAIN 3-FT MINIMUM HORIZONTAL CLEARANCE FROM ALL EXISTING UTILITIES. WATERLINE AND LATERALS SHALL ALSO MAINTAIN A MINIMUM 0.5 FT VERTICAL CLEARANCE WHEN CROSSING EXISTING UTILITIES. ADDITIONAL CLEARANCE IS REQUIRED WHEN SHOWN ON PLANS.
- CONTRACTOR MAY BEND PIPE AND/OR DEFLECT JOINTS WITHIN MANUFACTURER'S RECOMMENDATIONS TO FOLLOW PROPOSED ALIGNMENT.
- WATER MAIN MUST MAINTAIN A MINIMUM OF 36-IN OF COVER OR BE BACKFILLED WITH 2-SACK CONCRETE SLURRY PER SLO COUNTY STD U-4b.
- ALL THRUST BLOCKS AND ANCHOR BLOCKS MUST BE CONSTRUCTED AGAINST UNDISTURBED NATIVE EARTH.
- REPAIR PAVEMENT DISTURBED BY TRENCHING PER SLO COUNTY STD. DETAIL R-1 AND R-3a. ROAD REPAIR SECTION SHALL BE MINIMUM OF 5" HMA OVER 12" CLASS II AGG. BASE OR MATCH EXISTING STRUCTURAL SECTION IF DIRECTED BY ENGINEER. ROAD REPAIR SECTION IS BASED ON PRELIMINARY SOIL ANALYSIS AND MAY BE MODIFIED BASED ON SUBGRADE R-VALUE DETERMINED DURING CONSTRUCTION.
- ALL GATE VALVES SHALL BE INSTALLED PER SLO COUNTY STD. DETAIL W-3.
- ALL PIPE TO DI FITTING CONNECTIONS SHALL BE EQUIPPED WITH RESTRAINTS (EBAA SERIES 2000 PV FOR PVC/SERIES 1100 FOR DI, OR APPROVED EQUAL).
- EXISTING STRIPING AND SIGNS ARE NOT SHOWN IN ALL INSTANCES. CONTRACTOR SHALL REPLACE IN-KIND ALL DISTURBED SIGNS AND STRIPING, AS DIRECTED BY THE ENGINEER.
- EXPECTED LIMITS OF ROAD REPAIR, INCLUDING GRIND & OVERLAY PER TABLE 1, SLO COUNTY STD DETAIL R-3A, HAVE BEEN SUMMARIZED IN THE "EXPECTED AC REPLACEMENT" TABLE ON SHEET 2. TABLE IS AN ESTIMATE ONLY. CONTRACTOR TO VERIFY ALL VALUES FOR PURPOSES OF BIDDING.

CONSTRUCTION NOTES

- INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APCO 140C OR APPROVED EQUAL
- INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5a
- INSTALL 3/4" WATER SERVICE CONNECTION PER SLO COUNTY STANDARD DETAIL W-4
- INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
- INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- INSTALL 4" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- INSTALL 18" 3/8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
- INSTALL PUMPOUT PER DETAIL 3, SHEET 19
- INSTALL PUMPOUT PER DETAIL 4, SHEET 19
- FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL)
- SPECIAL PIPE REQUIRED PER WATER SEPARATION GUIDELINES. INSTALL 20' LONG STICK OF 8" AWWA C900, DR14 PVC PIPE, CENTERED UNDER/OVER CROSSING UTILITY.
- INSTALL 8" C900 PVC WATER MAIN IN OPEN TRENCH W/ 2 SACK SLURRY BACKFILL PER SLO COUNTY STANDARD DETAIL U-4b.
- INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
- GROOVED COUPLING (VCTAULIC STYLE 31 OR APPROVED EQUAL)
- RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL)
- D.I. SPOOL WITH GROOVE (FLG x PE)
- INSTALL 6" THICK DECOMPOSED GRANITE.
- CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
- INSTALL DOUBLE STRAP SERVICE SADDLE WITH 3/4" NPT OUTLET, SIZE PER PLAN. ENGINEER TO CONFIRM LOCATION AND ROTATION. CONTRACTOR TO DRILL & CAP FOR LATERAL SERVICE BY OTHERS
- INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #11.
- FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).



PROFILE
SCALE: HORIZ. 1" = 40'; VERT. 1" = 4'

EXPECTED AC REPLACEMENT

STATION RANGE	LEFT EXTENTS	RIGHT EXTENTS
AMWC CONNECTION	ETW	EDGE OF TRENCH + 1-FT
STA 9+50 TO STA 9+90	NO AC REPLACEMENT EXPECTED	
STA 9+90 TO STA 63+50	ETW	EP
STA 63+50 TO STA 66+25	CENTER OF TRAVEL LANE	EP
STA 66+25 TO STA 70+60	ETW	EP
STA 70+60 TO STA 134+60	NO AC REPLACEMENT EXPECTED	
STA 134+60 TO STA 136+95	ETW	EP
STA 136+95 TO STA 137+50	NO AC REPLACEMENT EXPECTED	

NOTE:
1. EXACT WIDTH OF ACTUAL TRENCH, SOIL CONDITIONS, & CONSTRUCTION METHODS ARE UNKNOWN. REQUIRED TRENCH REPAIR AND ASPHALT REPLACEMENT SHALL BE PER SLO COUNTY STD DETAIL R-1 & R-3A. VALUES IN THIS TABLE ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ALL VALUES FOR PURPOSES OF BIDDING.

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CSA23 INTERTIE IMPROVEMENTS						
PLAN & PROFILE – STA 9+50.86 TO STA 15+00						
SAN LUIS OBISPO COUNTY, CA.						
Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
	JT	2/17/15	JT	2/17/15	CG	2/17/15

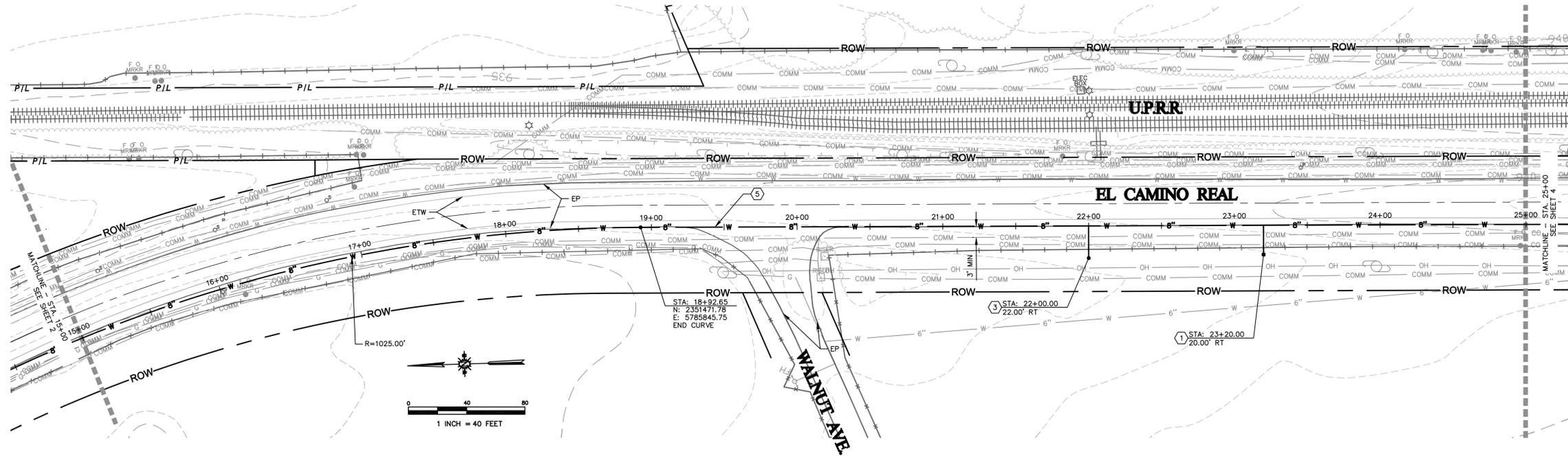
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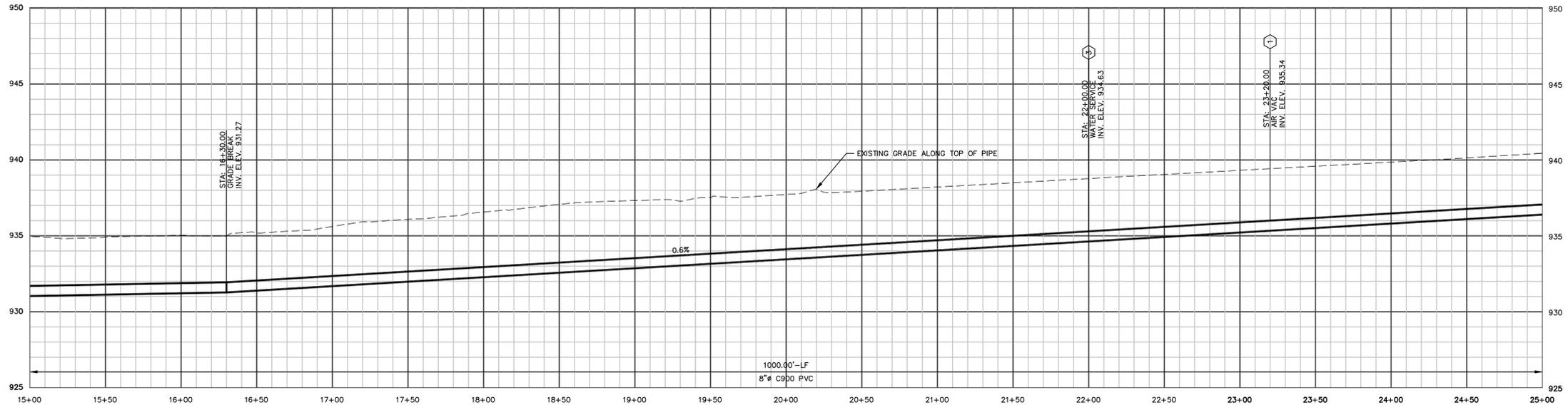
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CSA23 INTERTIE WATERLINE - PLAN VIEW

SCALE HORIZ 1"=40'



PROFILE

SCALE: HORIZ. 1" = 40'; VERT. 1" = 4'

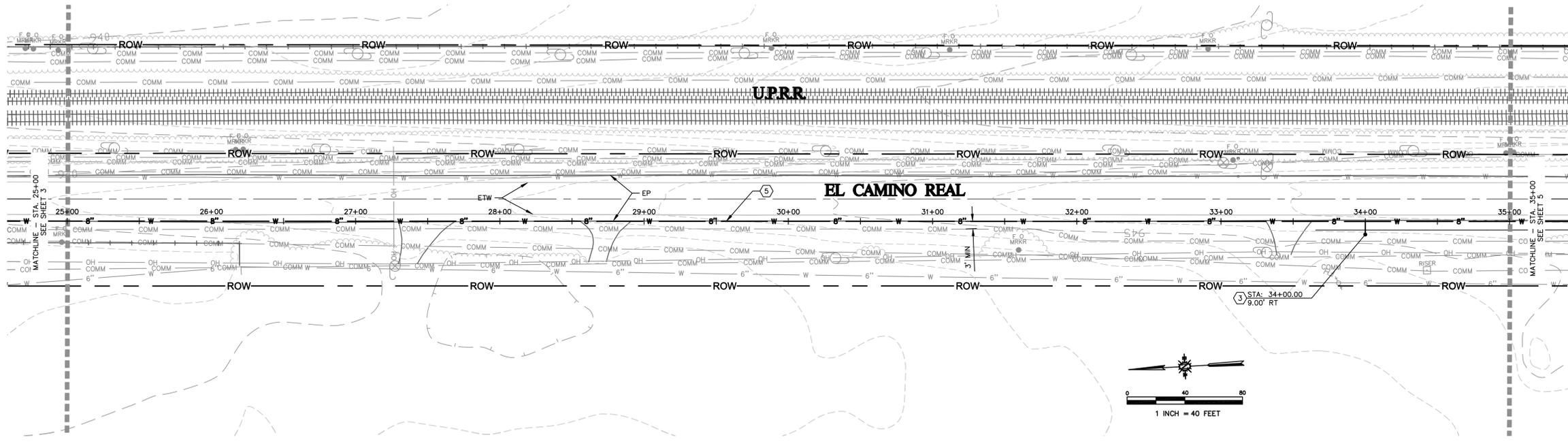
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0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 3

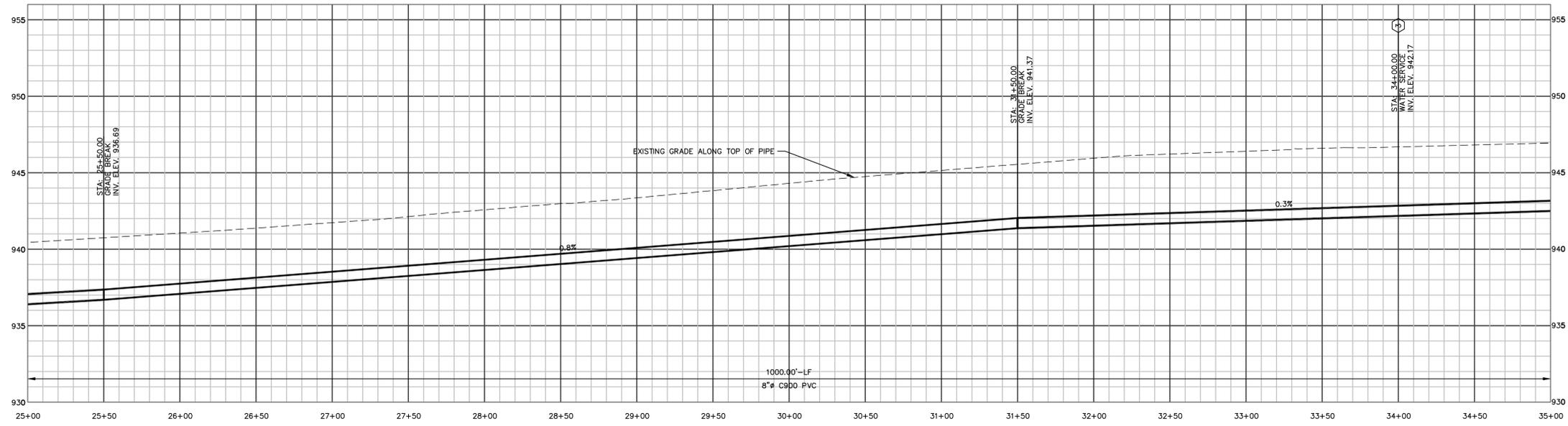


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CSA23 INTERTIE WATERLINE – PLAN VIEW
SCALE HORIZ 1"=40'



PROFILE
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 - PRIOR TO CONSTRUCTION, CONTRACTOR SHALL POLOTH AND VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR SHALL USE POSITIVE LOCATION METHODS PER CALTRANS PUBLICATION – "POLICY ON HIGH AND LOW RISK UNDERGROUND FACILITIES WITHIN HIGHWAY RIGHTS OF WAY"
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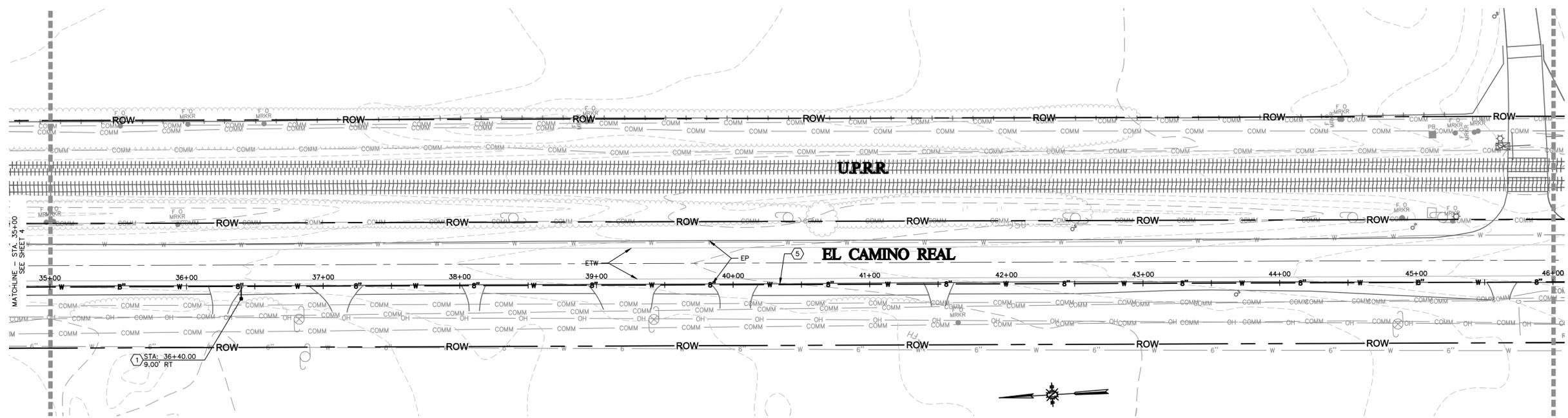
CSA23 INTERTIE IMPROVEMENTS
PLAN & PROFILE – STA 25+00 TO STA 35+00
SAN LUIS OBISPO COUNTY, CA.

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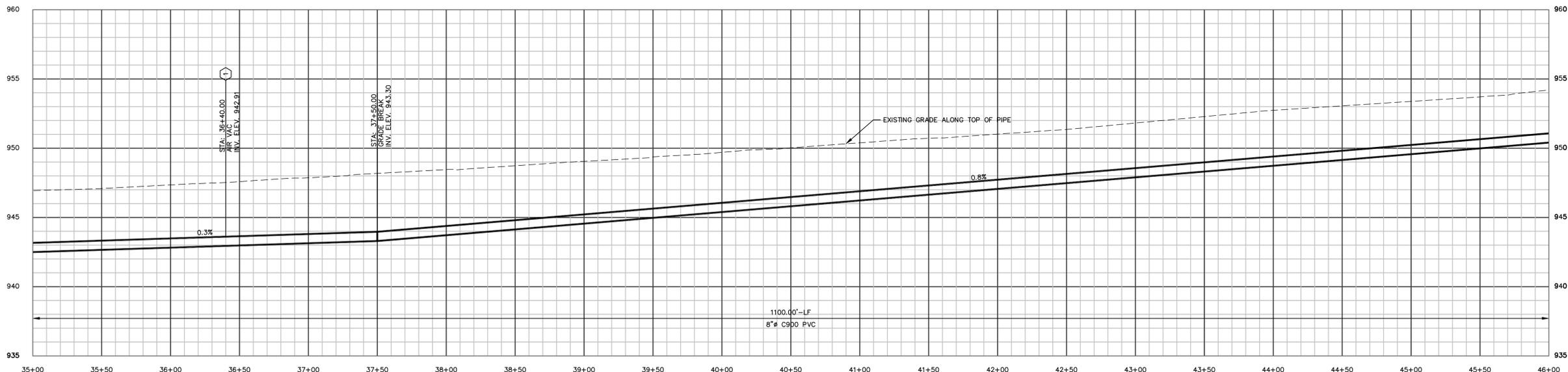
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ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	5	20



CSA23 INTERTIE WATERLINE – PLAN VIEW
SCALE HORIZ 1"=40'



PROFILE
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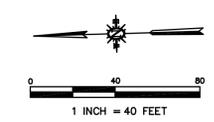
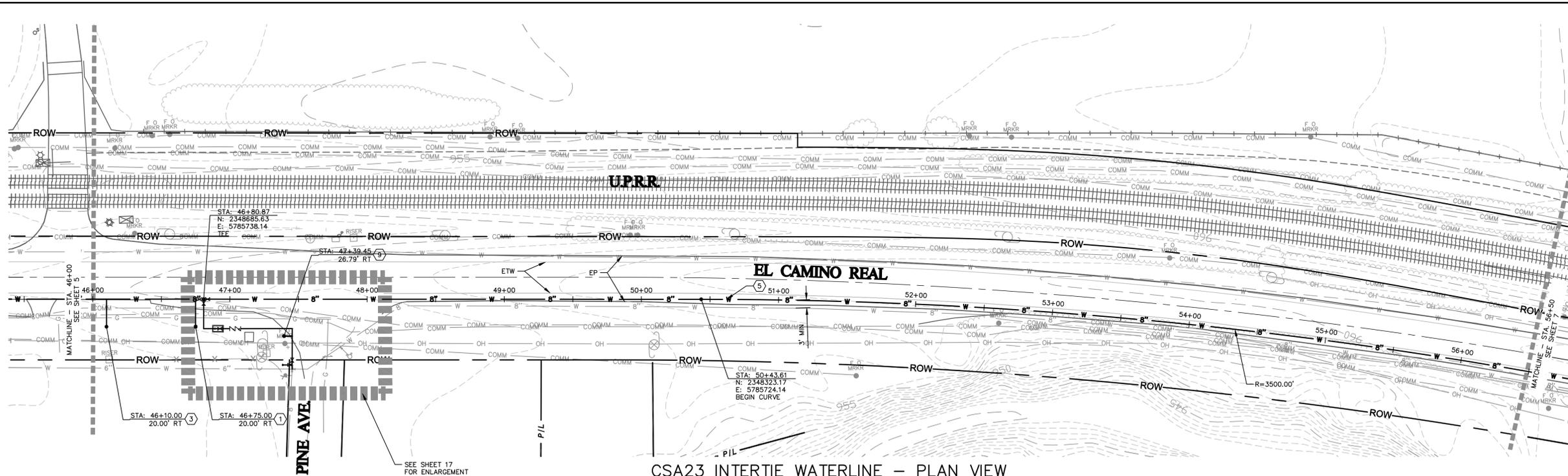
CSA23 INTERTIE IMPROVEMENTS
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SAN LUIS OBISPO COUNTY, CA.

Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
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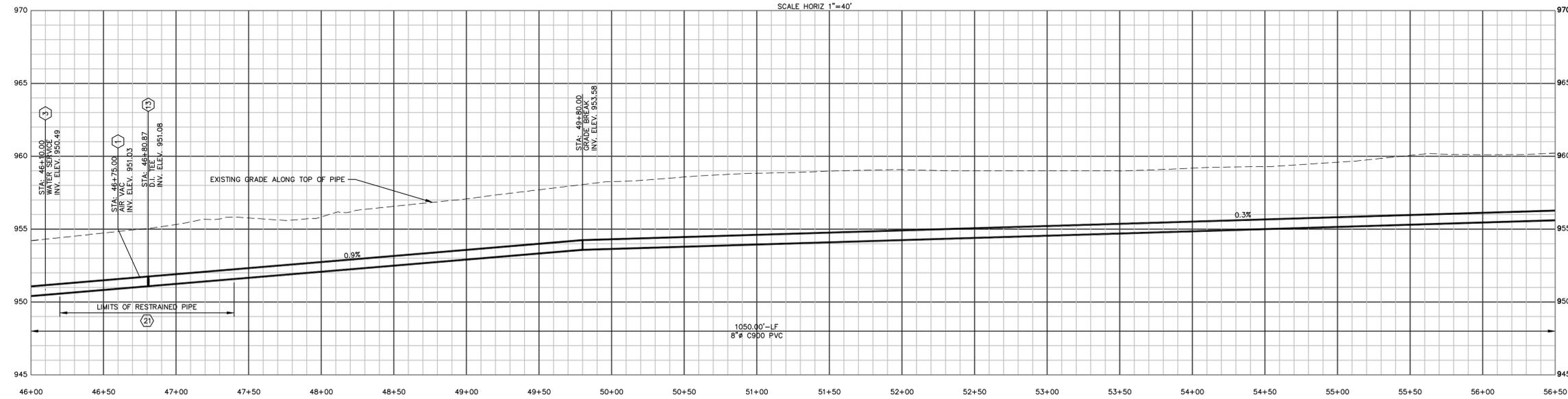
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ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	6	20



CSA23 INTERTIE WATERLINE – PLAN VIEW



PROFILE
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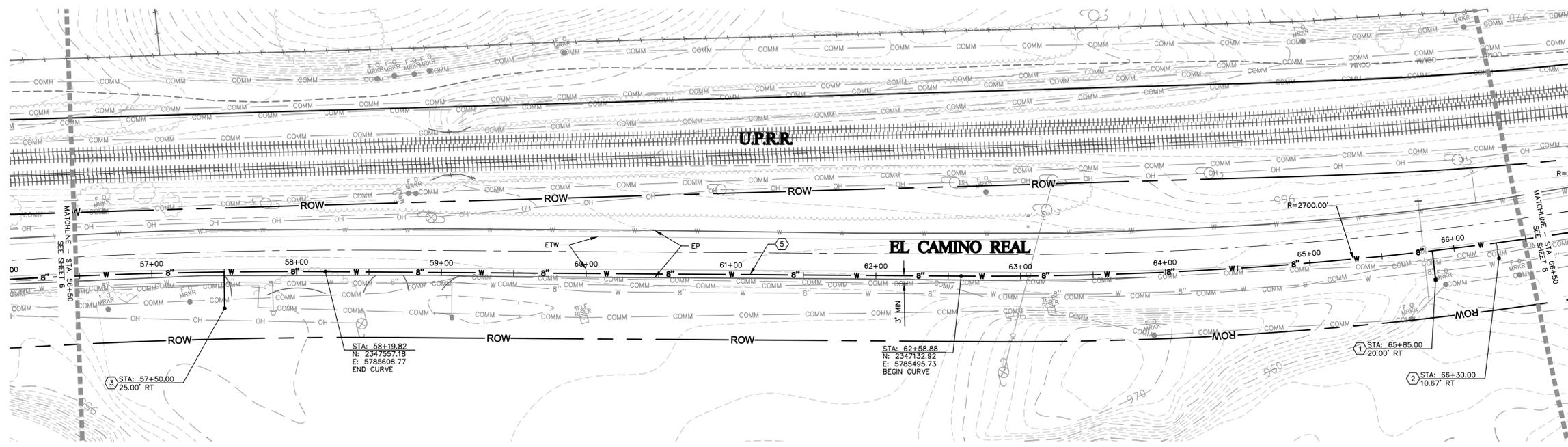
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Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
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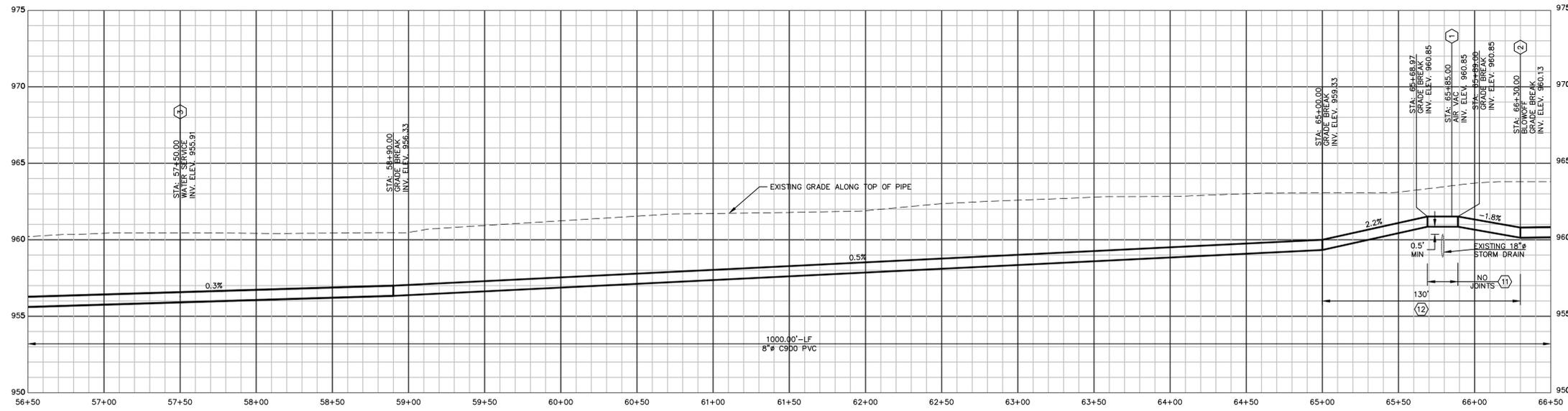


ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	7	20



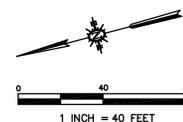
CSA23 INTERTIE WATERLINE – PLAN VIEW

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- INSTALL 8" C900 PVC WATER MAIN IN OPEN TRENCH W/ 2 SACK SLURRY BACKFILL PER SLO COUNTY STANDARD DETAIL U-4b.
- INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
- GROOVED COUPLING (MECHANICAL STYLE 31 OR APPROVED EQUAL)
- RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL)
- D.I. SPOOL WITH GROOVE (FLG x PE)
- INSTALL 6" THICK DECOMPOSED GRANITE.
- CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
- INSTALL DOUBLE STRAP SERVICE SADDLE WITH 1/2" NPT OUTLET, SIZE PER PLAN. ENGINEER TO CONFIRM LOCATION AND ROTATION. CONTRACTOR TO DRILL & CAP FOR LATERAL SERVICE BY OTHERS.
- INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #11.
- FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).



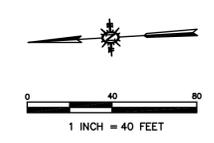
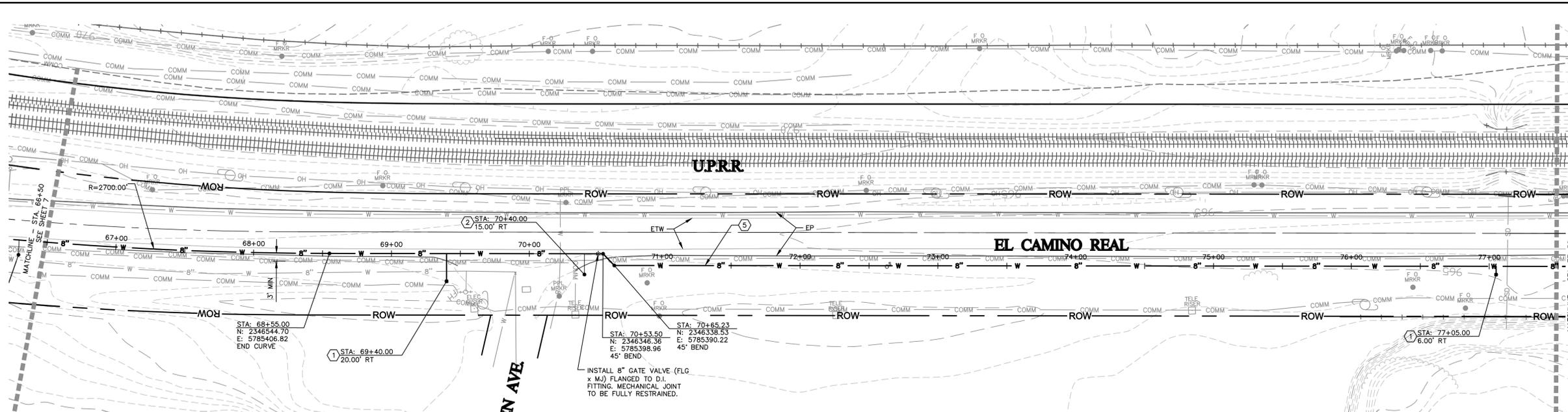
**CSA23 INTERTIE IMPROVEMENTS
PLAN & PROFILE – STA 56+50 TO STA 66+50
SAN LUIS OBISPO COUNTY, CA.**

Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
JT	JT	2/17/15	JT	2/17/15	CG	2/17/15

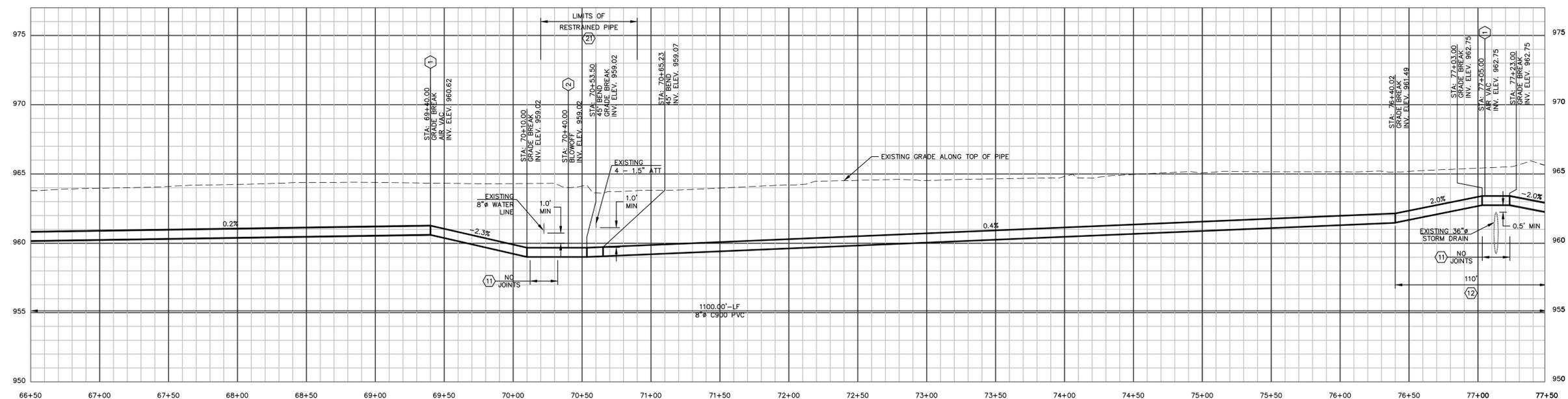
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ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	8	20



CSA23 INTERTIE WATERLINE – PLAN VIEW
SCALE HORIZ 1"=40'



PROFILE
SCALE: HORIZ. 1" = 40'; VERT. 1" = 4'

GENERAL NOTES

- LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND BASED ON AVAILABLE INFORMATION PROVIDED BY UTILITY COMPANIES. IN INSTANCES WHERE NO VERTICAL UTILITY INFORMATION COULD BE FOUND, THE DEPTH OF THESE UTILITIES ARE SHOWN THREE FEET BELOW GROUND SURFACE.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL POTHOLE AND VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR SHALL USE POSITIVE LOCATION METHODS PER CALTRANS PUBLICATION – "POLICY ON HIGH AND LOW RISK UNDERGROUND FACILITIES WITHIN HIGHWAY RIGHTS OF WAY"
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF THE DISCOVERY OF ANY UTILITY THAT WAS OMITTED FROM THE PLANS, INCORRECTLY SHOWN OR NOT PROPERLY MARKED. IF THE UTILITY COMPANY DOES NOT PROVIDE LOCATION INFORMATION OR MARKING SERVICES IN THE FIELD, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- OVERHEAD UTILITIES ARE NOT SHOWN IN ALL INSTANCES. CONTRACTOR SHALL USE DUE CARE WHEN WORKING NEAR OR UNDER SAID UTILITIES AND SHALL PROTECT THEM IN PLACE.
- THE CONTRACTOR SHALL NOT INTERRUPT THE UTILITY SERVICE FUNCTION, DISTURB THE SUPPORT BASE, OR MODIFY ANY FACILITY WITHOUT AUTHORITY FROM THE UTILITY OWNER.
- EXISTING PIPELINES/UTILITIES THAT CROSS NEW SYSTEM PIPING OR SIMILAR EXCAVATIONS REQUIRED TO CONSTRUCT THE PIPING SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED. ALL EXISTING PIPELINES/UTILITIES SHALL BE SUPPORTED ACROSS THE EXCAVATION DURING CONSTRUCTION.
- INTERFERING PORTIONS OF ABANDONED UTILITIES SHALL BE REMOVED AND DISPOSED OF AS UNSUITABLE MATERIAL BY THE CONTRACTOR. THE CUT ENDS SHALL BE PLUGGED WITH BRICK AND MORTAR OR CONCRETE. THE CONTRACTOR SHALL VERIFY THAT THE UTILITY IS TRULY ABANDONED PRIOR TO REMOVAL.

- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER IF ANY UTILITY IS DISTURBED OR DAMAGED DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BEAR THE COSTS OF REPAIR OR REPLACEMENT OF ANY MARKED UTILITY WHERE DAMAGE WAS CAUSED BY THE CONTRACTOR'S ACTIVITIES.
- WATERLINE SHALL MAINTAIN 3-FT MINIMUM HORIZONTAL CLEARANCE FROM ALL EXISTING UTILITIES. WATERLINE AND LATERALS SHALL ALSO MAINTAIN A MINIMUM 0.5 FT VERTICAL CLEARANCE WHEN CROSSING EXISTING UTILITIES. ADDITIONAL CLEARANCE IS REQUIRED WHEN SHOWN ON PLANS.
- CONTRACTOR MAY BEND PIPE AND/OR DEFLECT JOINTS WITHIN MANUFACTURER'S RECOMMENDATIONS TO FOLLOW PROPOSED ALIGNMENT.
- WATER MAIN MUST MAINTAIN A MINIMUM OF 36-IN OF COVER OR BE BACKFILLED WITH 2-SACK CONCRETE SLURRY PER SLO COUNTY STD U-4b.
- ALL THRUST BLOCKS AND ANCHOR BLOCKS MUST BE CONSTRUCTED AGAINST UNDISTURBED NATIVE EARTH.
- REPAIR PAVEMENT DISTURBED BY TRENCHING PER SLO COUNTY STD. DETAIL R-1 AND R-3a. ROAD REPAIR SECTION SHALL BE MINIMUM OF 5" HMA OVER 12" CLASS II AGG. BASE OR MATCH EXISTING STRUCTURAL SECTION IF DIRECTED BY ENGINEER. ROAD REPAIR SECTION IS BASED ON PRELIMINARY SOIL ANALYSIS AND MAY BE MODIFIED BASED ON SUBGRADE R-VALUE DETERMINED DURING CONSTRUCTION.
- ALL GATE VALVES SHALL BE INSTALLED PER SLO COUNTY STD. DETAIL W-3.
- ALL PIPE TO DI FITTING CONNECTIONS SHALL BE EQUIPPED WITH RESTRAINTS (EBAA SERIES 2000 PV FOR PVC/SERIES 1100 FOR DI, OR APPROVED EQUAL).
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- EXPECTED LIMITS OF ROAD REPAIR, INCLUDING GRIND & OVERLAY PER TABLE 1, SLO COUNTY STD DETAIL R-3a, HAVE BEEN SUMMARIZED IN THE "EXPECTED AC REPLACEMENT" TABLE ON SHEET 2. TABLE IS AN ESTIMATE ONLY. CONTRACTOR TO VERIFY ALL VALUES FOR PURPOSES OF BIDDING.

CONSTRUCTION NOTES

- INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APCO 140C OR APPROVED EQUAL.
- INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5a
- INSTALL 3/4" WATER SERVICE CONNECTION PER SLO COUNTY STANDARD DETAIL W-4
- INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
- INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- INSTALL 4" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- INSTALL 18" 3/8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
- INSTALL PUMP-OUT PER DETAIL 3, SHEET 19
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- FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL)
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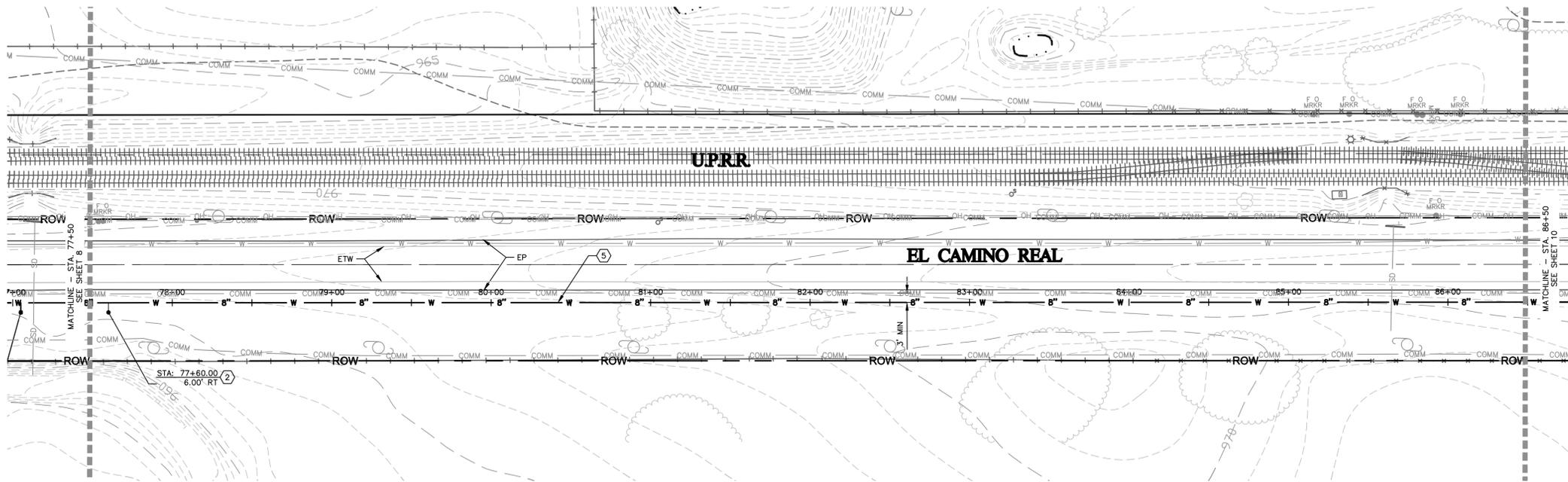


CSA23 INTERTIE IMPROVEMENTS					
PLAN & PROFILE – STA 66+50 TO STA 77+50					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
	JT	2/17/15	JT	2/17/15	CG

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	9	20

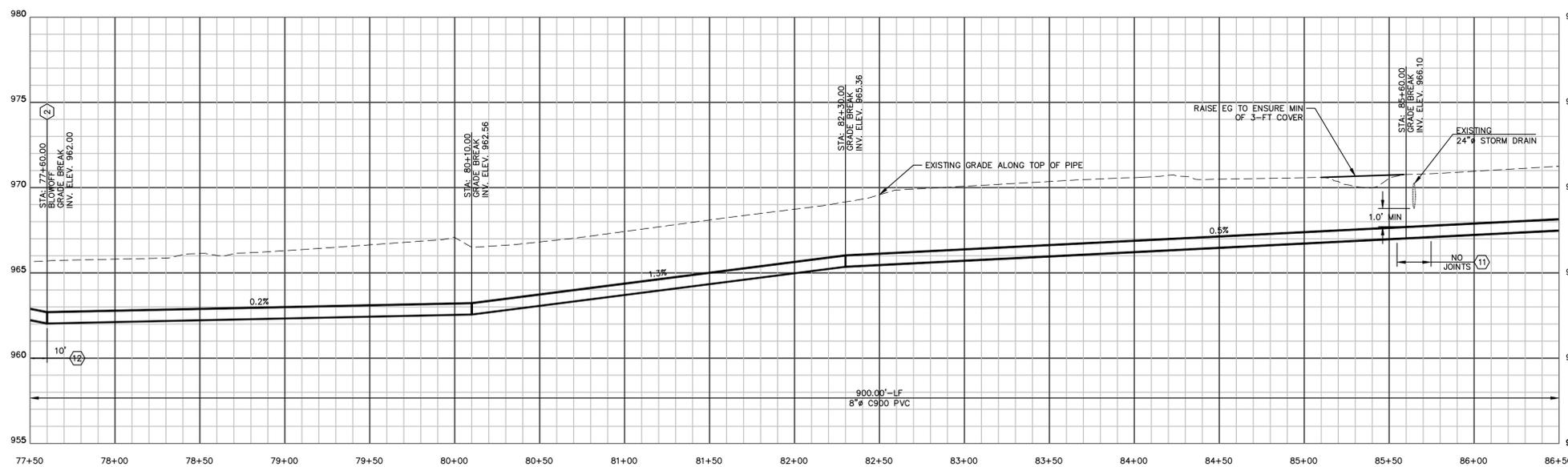
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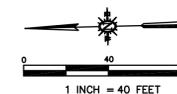
CSA23 INTERTIE WATERLINE - PLAN VIEW

SCALE HORIZ 1" = 40'



PROFILE

SCALE: HORIZ. 1" = 40'; VERT. 1" = 4'



CONSTRUCTION NOTES

- INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APCO 140C OR APPROVED EQUAL.
- INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5a
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- INSTALL 18" x 8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
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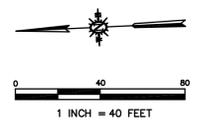
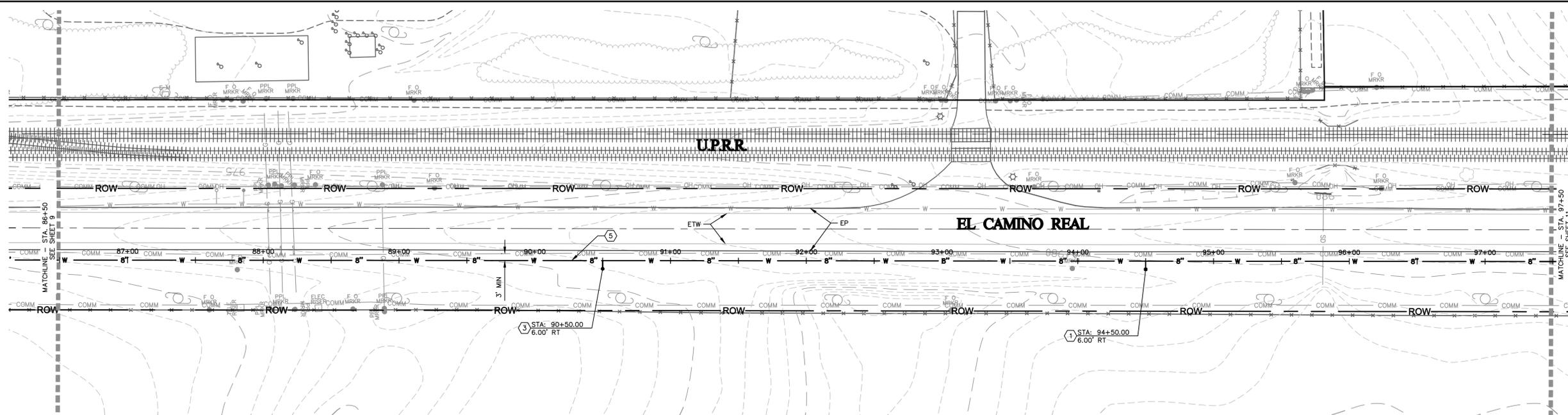
CSA23 INTERTIE IMPROVEMENTS
 PLAN & PROFILE - STA 77+50 TO STA 86+50
 SAN LUIS OBISPO COUNTY, CA.

Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
JT	JT	2/17/15	JT	2/17/15	CG	2/17/15

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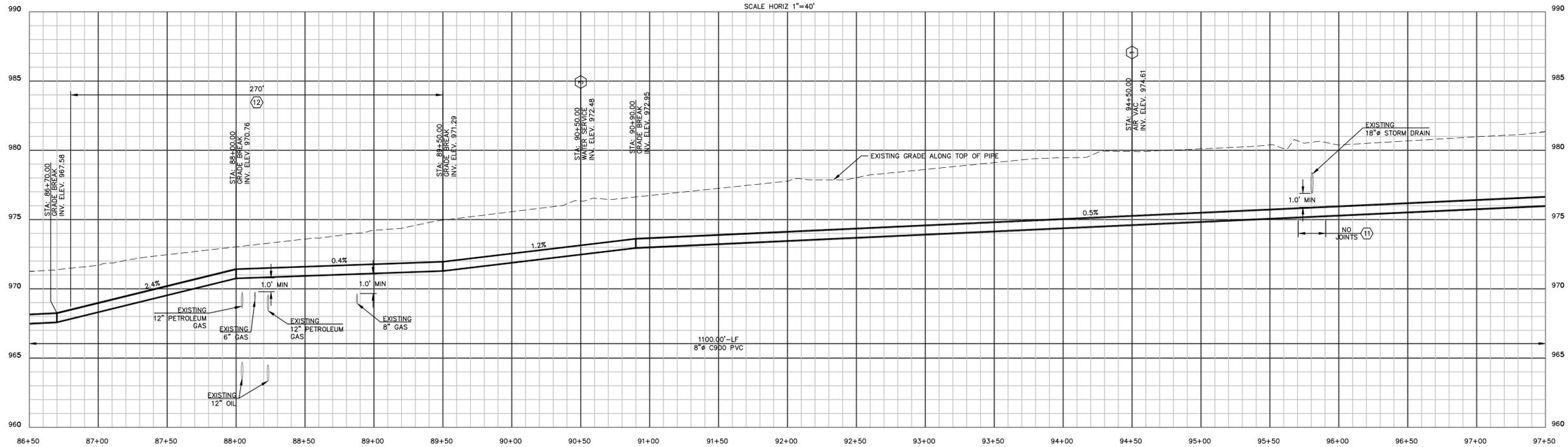
0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 3

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	10	20



CSA23 INTERTIE WATERLINE – PLAN VIEW

SCALE HORIZ 1"=40'



PROFILE

SCALE: HORIZ. 1" = 40'; VERT. 1" = 4'

CONSTRUCTION NOTES

- (1) INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APCO 140C OR APPROVED EQUAL.
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- (5) INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4g. SEE GENERAL NOTE #11.
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- (8) INSTALL PUMPOUT PER DETAIL 3, SHEET 19
- (9) INSTALL PUMPOUT PER DETAIL 4, SHEET 19
- (10) FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL)
- (11) SPECIAL PIPE REQUIRED PER WATER SEPARATION GUIDELINES. INSTALL 20' LONG STICK OF 8" AWWA C900, DR14 PVC PIPE, CENTERED UNDER/OVER CROSSING UTILITY.
- (12) INSTALL 8" C900 PVC WATER MAIN IN OPEN TRENCH W/ 2 SACK SLURRY BACKFILL PER SLO COUNTY STANDARD DETAIL U-4b.
- (13) INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
- (14) GROOVED COUPLING (VICTAULIC STYLE 31 OR APPROVED EQUAL)
- (15) RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL)
- (16) D.I. SPOOL WITH GROOVE (FLG x PE)
- (17) INSTALL 6" THICK DECOMPOSED GRANITE.
- (18) CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
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- (20) INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #11.
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10. CONTRACTOR MAY BEND PIPE AND/OR DEFLECT JOINTS WITHIN MANUFACTURER'S RECOMMENDATIONS TO FOLLOW PROPOSED ALIGNMENT.
11. WATER MAIN MUST MAINTAIN A MINIMUM OF 36-IN OF COVER OR BE BACKFILLED WITH 2-SACK CONCRETE SLURRY PER SLO COUNTY STD U-4b.
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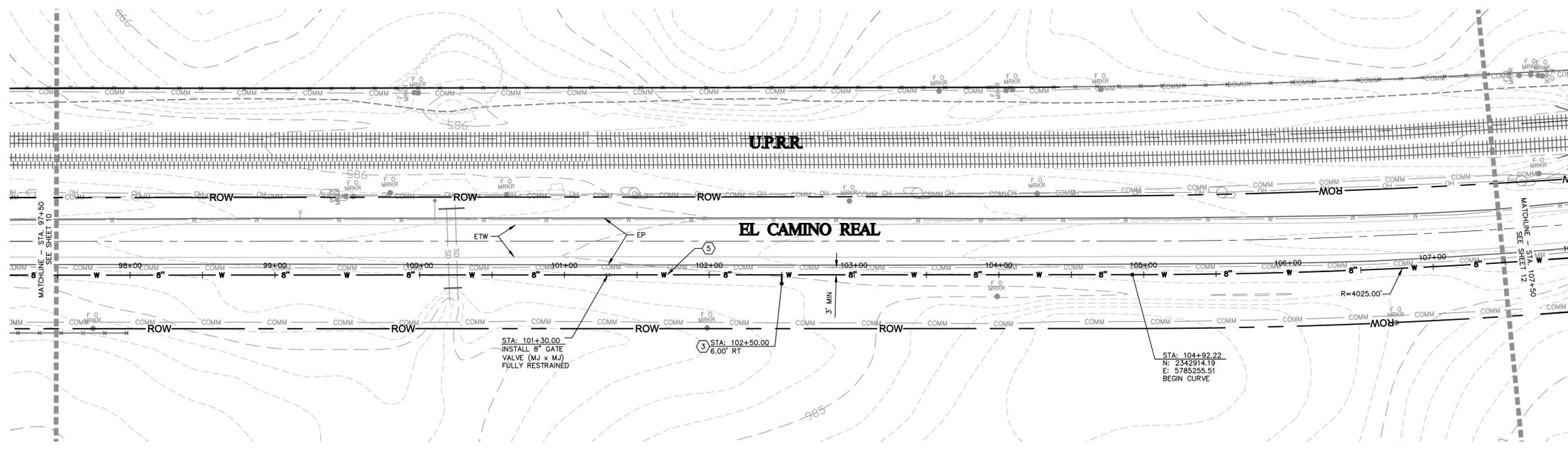


CSA23 INTERTIE IMPROVEMENTS					
PLAN & PROFILE – STA 86+50 TO STA 97+50					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
	JT	2/17/15	JT	2/17/15	CG

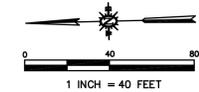
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0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 1 2 3

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	11	20



CSA23 INTERTIE WATERLINE – PLAN VIEW
SCALE HORIZ 1"=40'

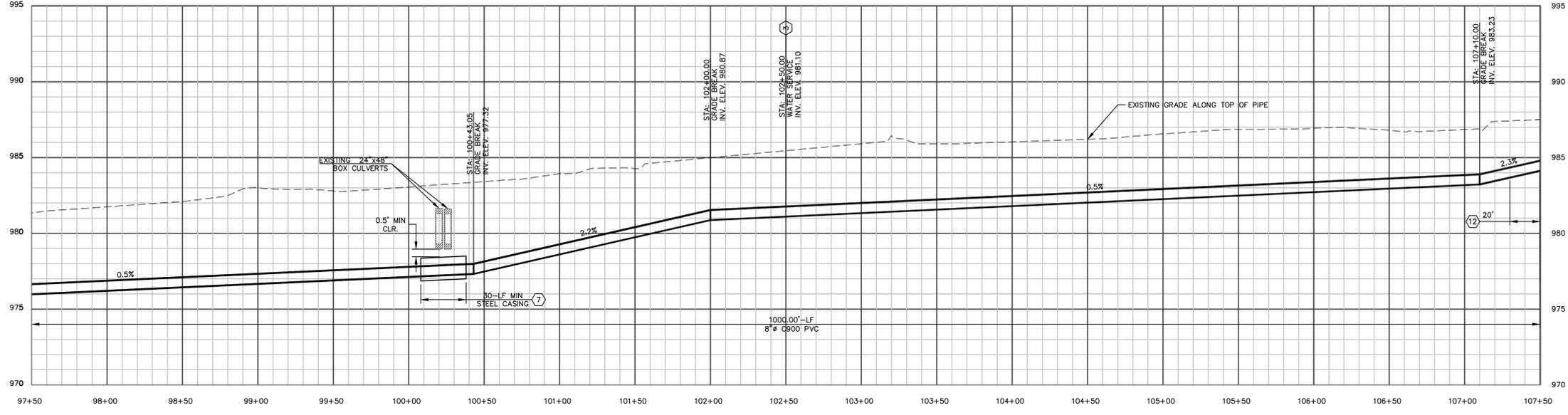


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- INTERFERING PORTIONS OF ABANDONED UTILITIES SHALL BE REMOVED AND DISPOSED OF AS UNSUITABLE MATERIAL BY THE CONTRACTOR. THE CUT ENDS SHALL BE PLUGGED WITH BRICK OR MORTAR OR CONCRETE. THE CONTRACTOR SHALL VERIFY THAT THE UTILITY IS TRULY ABANDONED PRIOR TO REMOVAL.
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- WATERLINE SHALL MAINTAIN 3'-FT MINIMUM HORIZONTAL CLEARANCE FROM ALL EXISTING UTILITIES. WATERLINE AND LATERALS SHALL ALSO MAINTAIN A MINIMUM 0.5 FT VERTICAL CLEARANCE WHEN CROSSING EXISTING UTILITIES. ADDITIONAL CLEARANCE IS REQUIRED WHEN SHOWN ON PLANS.
- CONTRACTOR MAY BEND PIPE AND/OR DEFLECT JOINTS WITHIN MANUFACTURER'S RECOMMENDATIONS TO FOLLOW PROPOSED ALIGNMENT.
- WATER MAIN MUST MAINTAIN A MINIMUM OF 36-IN OF COVER OR BE BACKFILLED WITH 2-SACK CONCRETE SLURRY PER SLO COUNTY STD U-4b.
- ALL THRUST BLOCKS AND ANCHOR BLOCKS MUST BE CONSTRUCTED AGAINST UNDISTURBED NATIVE EARTH.
- REPAIR PAVEMENT DISTURBED BY TRENCHING PER SLO COUNTY STD. DETAIL R-1 AND R-3a. ROAD REPAIR SECTION SHALL BE MINIMUM OF 5" HMA OVER 12" CLASS II AGG. BASE OR MATCH EXISTING STRUCTURE SECTION IF DIRECTED BY ENGINEER. ROAD REPAIR SECTION IS BASED ON PRELIMINARY SOIL ANALYSIS AND MAY BE MODIFIED BASED ON SUBGRADE R-VALUE DETERMINED DURING CONSTRUCTION.
- ALL GATE VALVES SHALL BE INSTALLED PER SLO COUNTY STD. DETAIL W-3.
- ALL PIPE TO DI FITTING CONNECTIONS SHALL BE EQUIPPED WITH RESTRAINTS (EBAA SERIES 2000 PV FOR PVC/SERIES 1100 FOR DI, OR APPROVED EQUAL).
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CONSTRUCTION NOTES

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- INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
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- INSTALL 4" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- INSTALL 18" x 8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
- INSTALL PUMPOUT PER DETAIL 3, SHEET 19.
- INSTALL PUMPOUT PER DETAIL 4, SHEET 19.
- FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL).
- SPECIAL PIPE REQUIRED PER WATER SEPARATION GUIDELINES. INSTALL 20' LONG STICK OF 8" AWWA C900, DR14 PVC PIPE, CENTERED UNDER/OVER CROSSING UTILITY.
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- INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
- GROOVED COUPLING (VICTAULIC STYLE 31 OR APPROVED EQUAL).
- RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL).
- D.I. SPOOL WITH GROOVE (FLG x PE).
- INSTALL 6" THICK DECOMPOSED GRANITE.
- CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
- INSTALL DOUBLE STRAP SERVICE SADDLE WITH 1/2" NPT OUTLET, SIZE PER PLAN. ENGINEER TO CONFIRM LOCATION AND ROTATION. CONTRACTOR TO DRILL & CAP FOR LATERAL SERVICE BY OTHERS.
- INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #11.
- FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).



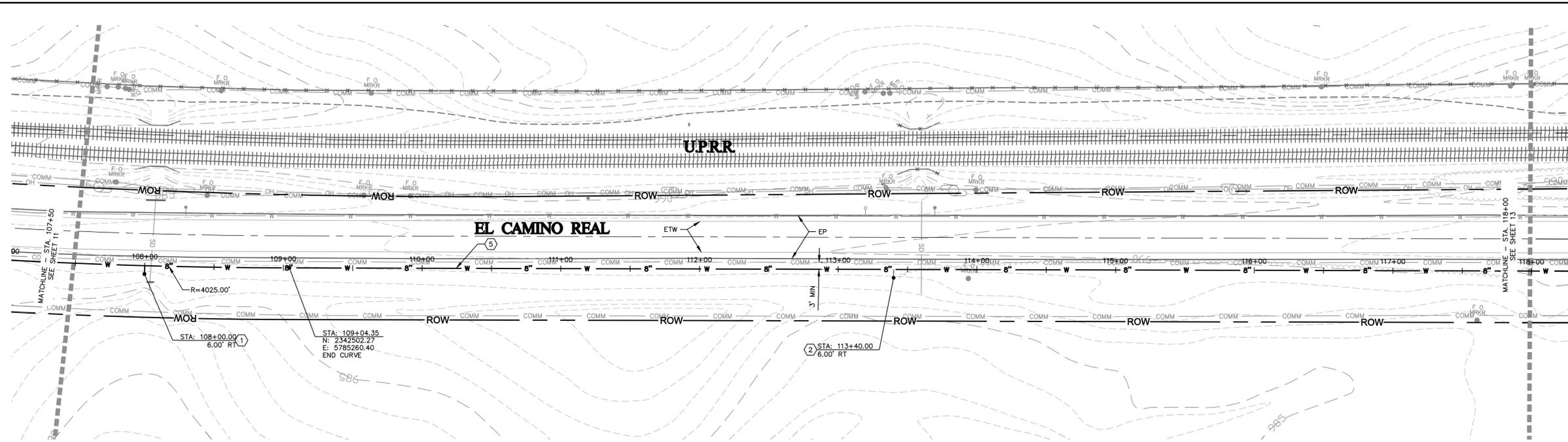
PROFILE
SCALE: HORIZ. 1" = 40'; VERT. 1" = 4'

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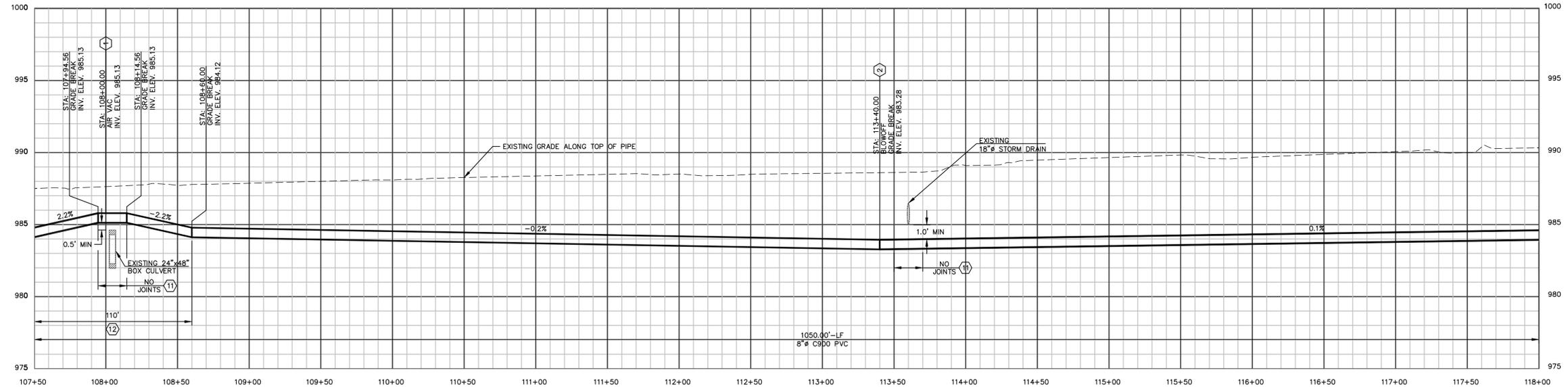


CSA23 INTERTIE IMPROVEMENTS					
PLAN & PROFILE – STA 97+50 TO STA 107+50					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
	JT	2/17/15	JT	2/17/15	CG

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	12	20



CSA23 INTERTIE WATERLINE – PLAN VIEW
SCALE HORIZ 1"=40'



PROFILE
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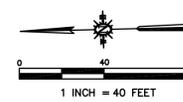
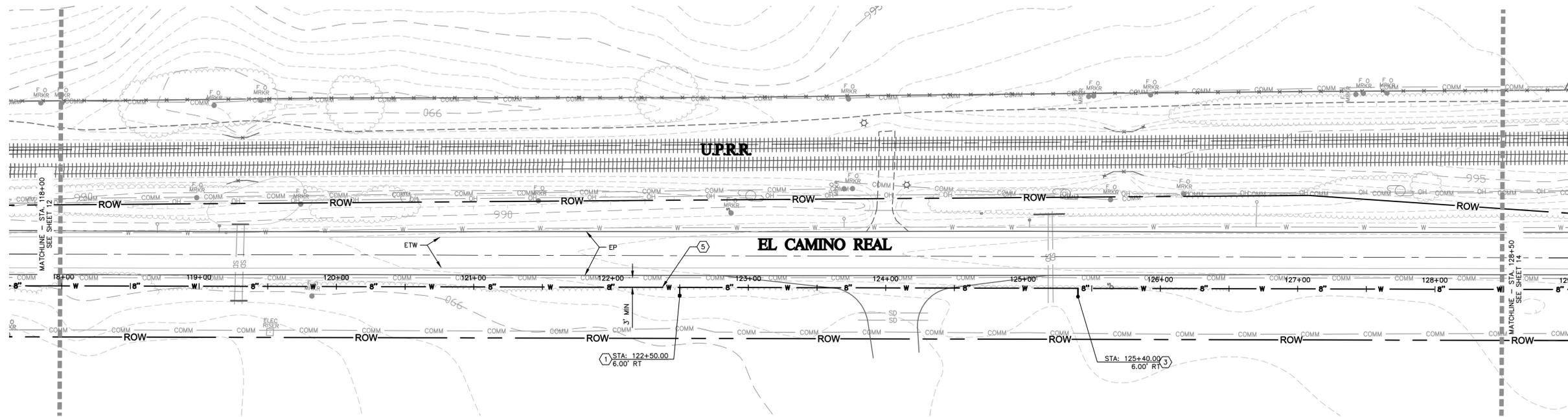
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CSA23 INTERTIE IMPROVEMENTS					
PLAN & PROFILE – STA 107+50 TO STA 118+00					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
	JT	2/17/15	JT	2/17/15	CG

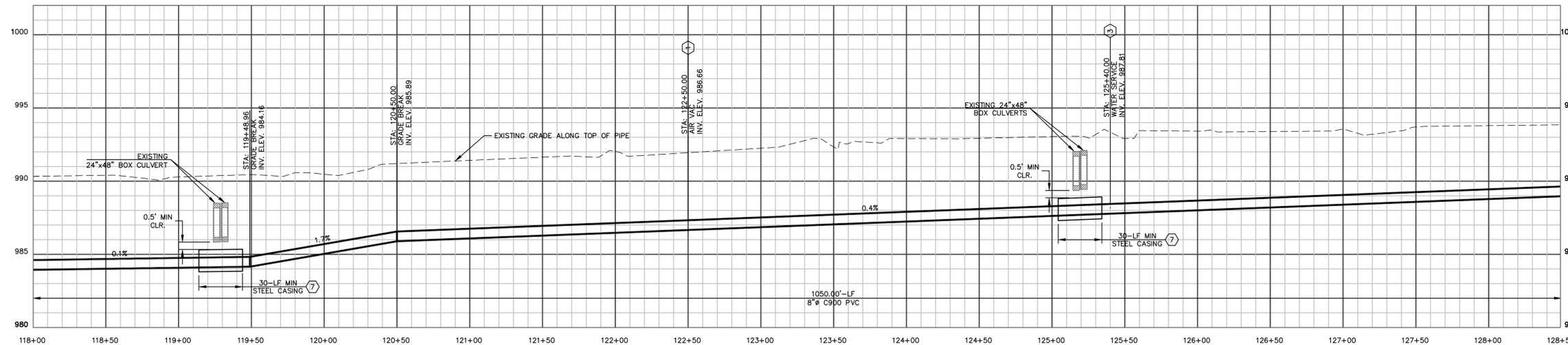
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ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	13	20



CSA23 INTERTIE WATERLINE – PLAN VIEW

SCALE HORIZ 1"=40'



PROFILE

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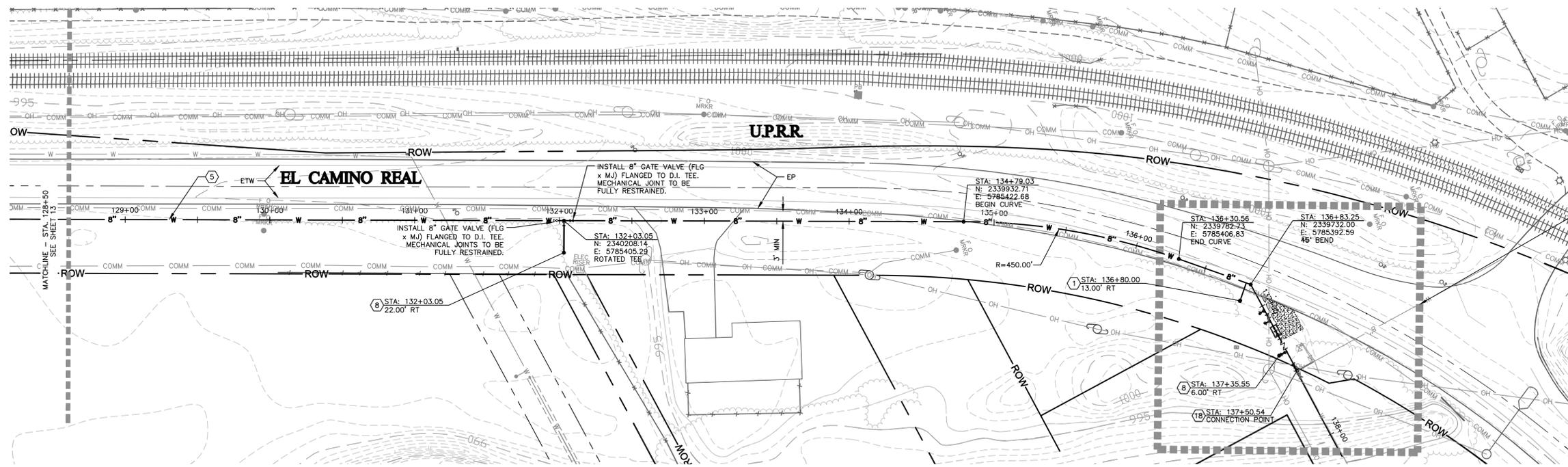
CSA23 INTERTIE IMPROVEMENTS
PLAN & PROFILE – STA 118+00 TO STA 128+50
SAN LUIS OBISPO COUNTY, CA.

Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
JT	JT	2/17/15	JT	2/17/15	CG	2/17/15

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0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 3

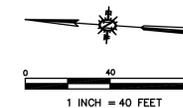
ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	14	20



CSA23 INTERTIE WATERLINE - PLAN VIEW

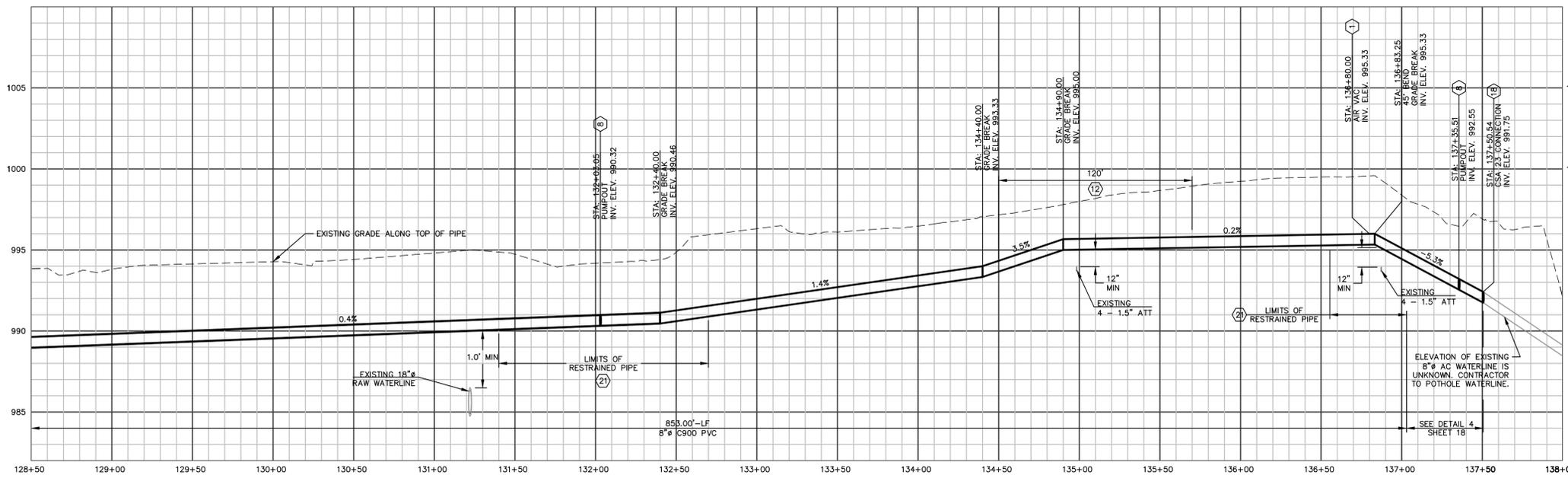
SCALE HORIZ 1"=40'

SEE SHEET 18 FOR ENLARGEMENT



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- EXISTING PIPELINES/UTILITIES THAT CROSS NEW SYSTEM PIPING OR SIMILAR EXCAVATIONS REQUIRED TO CONSTRUCT THE PIPING, SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED. ALL EXISTING PIPELINES/UTILITIES SHALL BE SUPPORTED ACROSS THE EXCAVATION DURING CONSTRUCTION.
- INTERFERING PORTIONS OF ABANDONED UTILITIES SHALL BE REMOVED AND DISPOSED OF AS UNSUITABLE MATERIAL BY THE CONTRACTOR. THE CUT ENDS SHALL BE PLUGGED WITH BRICK AND MORTAR OR CONCRETE. THE CONTRACTOR SHALL VERIFY THAT THE UTILITY IS TRULY ABANDONED PRIOR TO REMOVAL.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER IF ANY UTILITY IS DISTURBED OR DAMAGED DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BEAR THE COSTS OF REPAIR OR REPLACEMENT OF ANY MARKED UTILITY WHERE DAMAGE WAS CAUSED BY THE CONTRACTOR'S ACTIVITIES.
- WATERLINE SHALL MAINTAIN 3'-FT MINIMUM HORIZONTAL CLEARANCE FROM ALL EXISTING UTILITIES. WATERLINE AND LATERALS SHALL ALSO MAINTAIN A MINIMUM 0.5 FT VERTICAL CLEARANCE WHEN CROSSING EXISTING UTILITIES. ADDITIONAL CLEARANCE IS REQUIRED WHEN SHOWN ON PLANS.
- CONTRACTOR MAY BEND PIPE AND/OR DEFLECT JOINTS WITHIN MANUFACTURER'S RECOMMENDATIONS TO FOLLOW PROPOSED ALIGNMENT.
- WATER MAIN MUST MAINTAIN A MINIMUM OF 36-IN OF COVER OR BE BACKFILLED WITH 2-SACK CONCRETE SLURRY PER SLO COUNTY STD U-4b.
- ALL THRUST BLOCKS AND ANCHOR BLOCKS MUST BE CONSTRUCTED AGAINST UNDISTURBED NATIVE EARTH.
- REPAIR PAVEMENT DISTURBED BY TRENCHING PER SLO COUNTY STD. DETAIL R-1 AND R-3a. ROAD REPAIR SECTION SHALL BE MINIMUM OF 5" HMA OVER 12" CLASS II AGG. BASE OR MATCH EXISTING STRUCTURAL SECTION IF DIRECTED BY ENGINEER. ROAD REPAIR SECTION IS BASED ON PRELIMINARY SOIL ANALYSIS AND MAY BE MODIFIED BASED ON SUBGRADE R-VALUE DETERMINED DURING CONSTRUCTION.
- ALL GATE VALVES SHALL BE INSTALLED PER SLO COUNTY STD. DETAIL W-3.
- ALL PIPE TO DI FITTING CONNECTIONS SHALL BE EQUIPPED WITH RESTRAINTS (EBAA SERIES 2000 PV FOR PVC/SERIES 1100 FOR DI, OR APPROVED EQUAL).
- EXISTING STRIPING AND SIGNS ARE NOT SHOWN IN ALL INSTANCES. CONTRACTOR SHALL REPLACE IN-KIND ALL DISTURBED SIGNS AND STRIPING, AS DIRECTED BY THE ENGINEER.
- EXPECTED LIMITS OF ROAD REPAIR, INCLUDING GRIND & OVERLAY PER TABLE 1, SLO COUNTY STD DETAIL R-3a, HAVE BEEN SUMMARIZED IN THE "EXPECTED AGG REPLACEMENT" TABLE ON SHEET 2. TABLE IS AN ESTIMATE ONLY. CONTRACTOR TO VERIFY ALL VALUES FOR PURPOSES OF BIDDING.



PROFILE

SCALE: HORIZ 1" = 40'; VERT. 1" = 4'

CONSTRUCTION NOTES

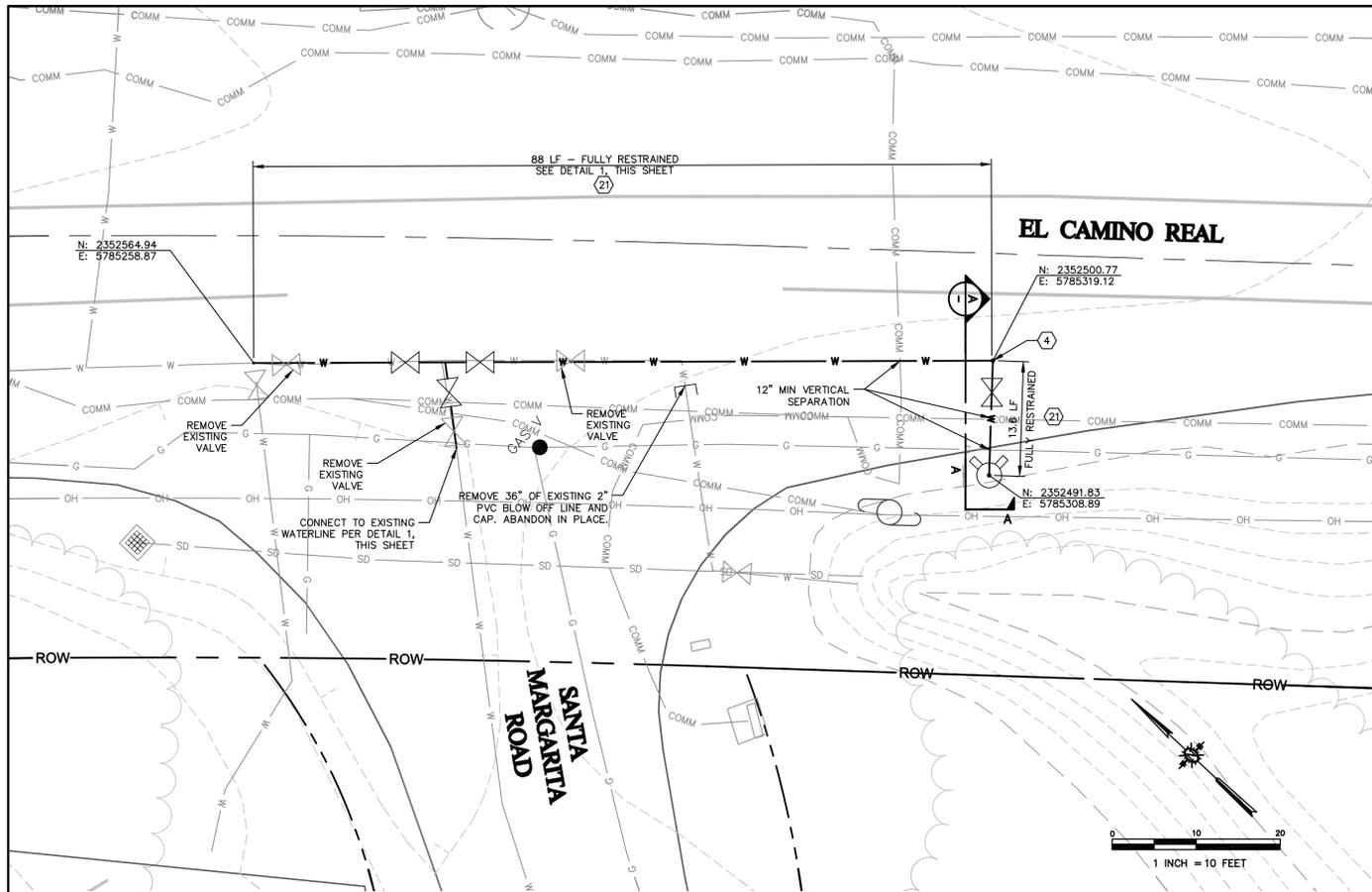
- INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APCO 140C OR APPROVED EQUAL.
- INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5g.
- INSTALL 3/4" WATER SERVICE CONNECTION PER SLO COUNTY STANDARD DETAIL W-4.
- INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
- INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4g. SEE GENERAL NOTE #11.
- INSTALL 4" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4g. SEE GENERAL NOTE #11.
- INSTALL 18" x 8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
- INSTALL PUMPOUT PER DETAIL 3, SHEET 19.
- INSTALL PUMPOUT PER DETAIL 4, SHEET 19.
- FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL).
- SPECIAL PIPE REQUIRED PER WATER SEPARATION GUIDELINES. INSTALL 20' LONG STOCK OF 8" ANMA C900, DR14 PVC PIPE, CENTERED UNDER/OVER CROSSING UTILITY.
- INSTALL 8" C900 PVC WATER MAIN IN OPEN TRENCH W/ 2 SACK SLURRY BACKFILL PER SLO COUNTY STANDARD DETAIL U-4b.
- INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
- GROOVED COUPLING (VICTAULIC STYLE 31 OR APPROVED EQUAL).
- RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL).
- D.I. SPOOL WITH GROOVE (FLG x PE).
- INSTALL 6" THICK DECOMPOSED GRANITE.
- CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
- INSTALL DOUBLE STRAP SERVICE SADDLE WITH 1/2" NPT OUTLET, SIZE PER PLAN. ENGINEER TO CONFIRM LOCATION AND ROTATION. CONTRACTOR TO DRILL & CAP FOR LATERAL SERVICE BY OTHERS.
- INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #11.
- FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).



CSA23 INTERTIE IMPROVEMENTS
PLAN & PROFILE - STA 128+50 TO STA 137+50.54
SAN LUIS OBISPO COUNTY, CA.

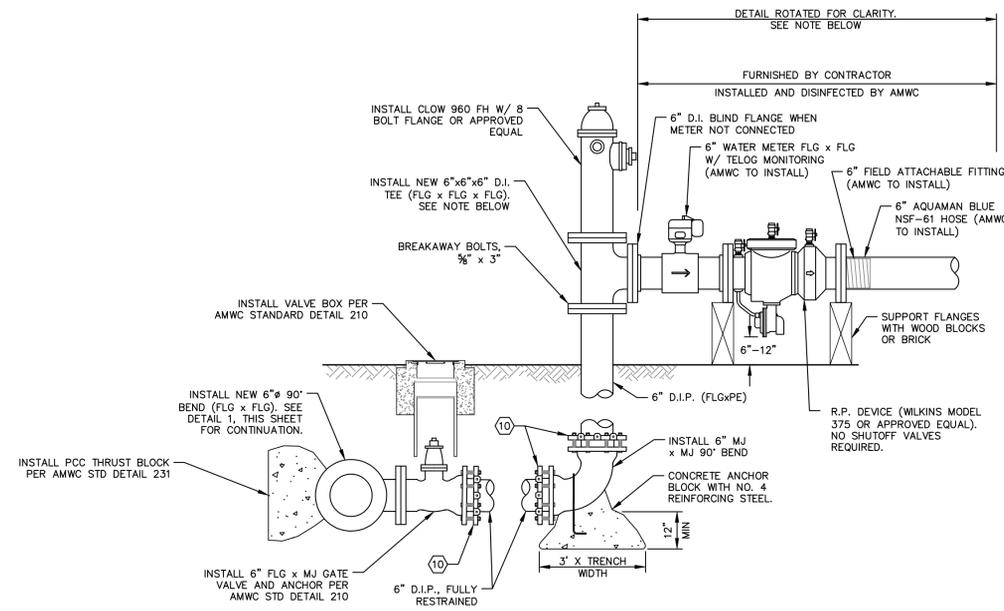
Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
	JT	2/17/15	JT	2/17/15	CG	2/17/15

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	15	20



AMWC WATERLINE EXTENSION - ENLARGEMENT VIEW

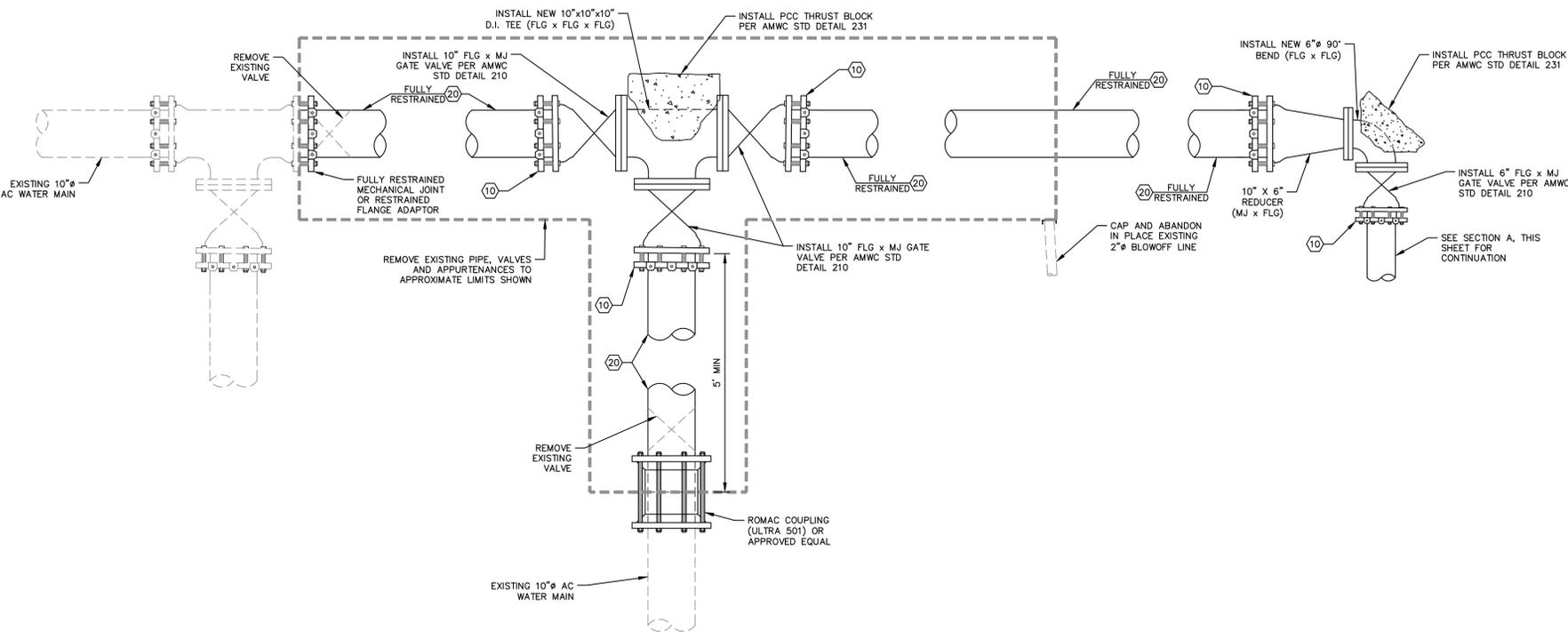
SCALE HORIZ 1"=10'



AMWC HYDRANT LATERAL SECTION (A)
SCALE: N.T.S.

CONSTRUCTION NOTES

- (1) INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APCO 140C OR APPROVED EQUAL.
- (2) INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5a
- (3) INSTALL 3/4" WATER SERVICE CONNECTION PER SLO COUNTY STANDARD DETAIL W-4
- (4) INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
- (5) INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- (6) INSTALL 4" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
- (7) INSTALL 18" 3/8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
- (8) INSTALL PUMPOUT PER DETAIL 3, SHEET 19
- (9) INSTALL PUMPOUT PER DETAIL 4, SHEET 19
- (10) FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL)
- (11) SPECIAL PIPE REQUIRED PER WATER SEPARATION GUIDELINES. INSTALL 20' LONG STICK OF 8" AWWA C900, DR14 PVC PIPE, CENTERED UNDER/OVER CROSSING UTILITY.
- (12) INSTALL 8" C900 PVC WATER MAIN IN OPEN TRENCH W/ 2 SACK SLURRY BACKFILL PER SLO COUNTY STANDARD DETAIL U-4a.
- (13) INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
- (14) GROOVED COUPLING (VICTAULIC STYLE 31 OR APPROVED EQUAL)
- (15) RESTRAINED FLANGE ADAPTOR (EBAA SERIES 2100 OR APPROVED EQUAL)
- (16) D.I. SPOOL WITH GROOVE (FLG x PE)
- (17) INSTALL 6" THICK DECOMPOSED GRANITE.
- (18) CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
- (19) INSTALL DOUBLE STRAP SERVICE SADDLE WITH 1/2" NPT OUTLET, SIZE PER PLAN. ENGINEER TO CONFIRM LOCATION AND ROTATION. CONTRACTOR TO DRILL & CAP FOR LATERAL SERVICE BY OTHERS
- (20) INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #1.
- (21) FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).



AMWC WATERLINE EXTENSION DETAIL (1)
SCALE: N.T.S.



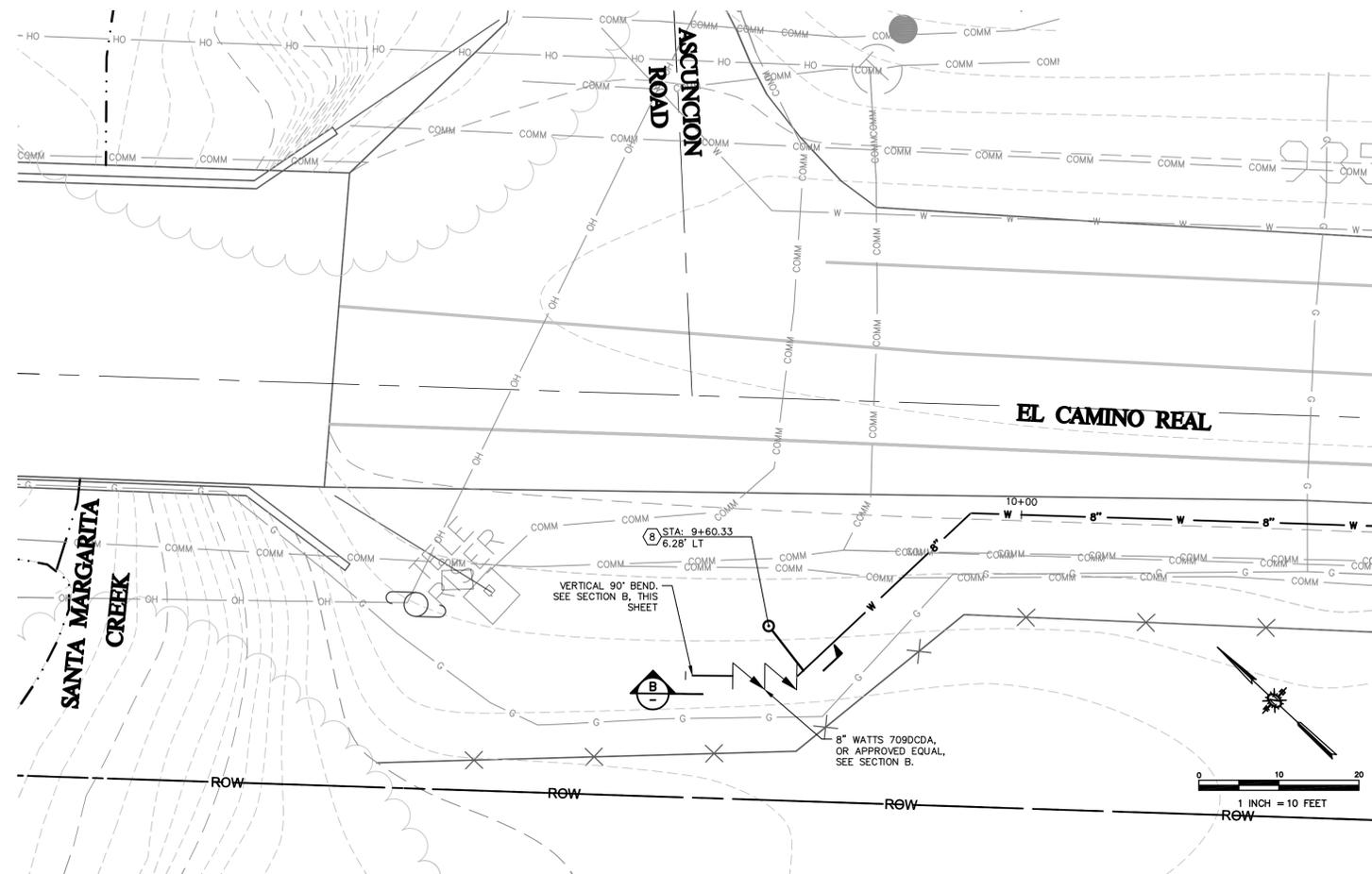
CSA23 INTERTIE IMPROVEMENTS
DETAIL SHEET
SAN LUIS OBISPO COUNTY, CA.

Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
JT	JT	2/17/15	JT	2/17/15	CG	2/17/15

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0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 3

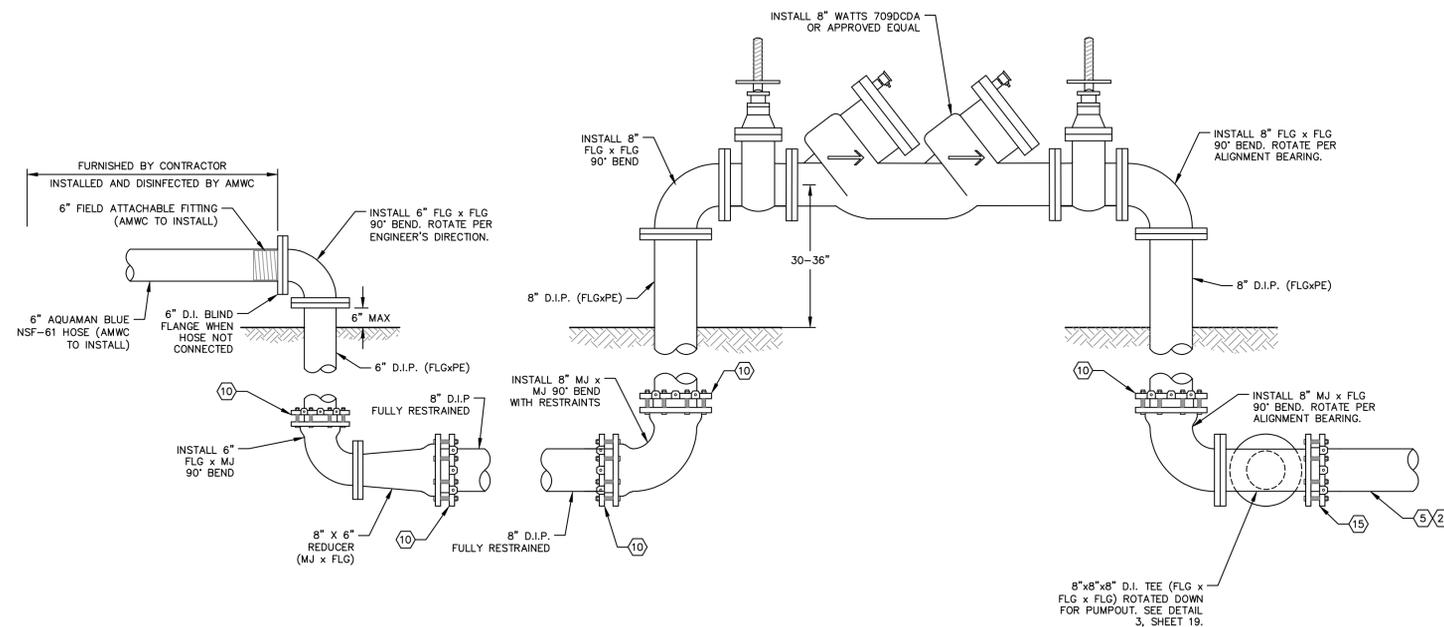
ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	16	20



AMWC CONNECTION POINT – ENLARGEMENT VIEW
SCALE HORIZ 1"=10'

CONSTRUCTION NOTES

1. INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE AFPCO 140C OR APPROVED EQUAL.
2. INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5a
3. INSTALL 3/4" WATER SERVICE CONNECTION PER SLO COUNTY STANDARD DETAIL W-4
4. INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
5. INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
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7. INSTALL 18" x 8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
8. INSTALL PUMPOUT PER DETAIL 3, SHEET 19
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12. INSTALL 8" C900 PVC WATER MAIN IN OPEN TRENCH W/ 2 SACK SLURRY BACKFILL PER SLO COUNTY STANDARD DETAIL U-4b.
13. INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
14. GROOVED COUPLING (VICTAULIC STYLE 31 OR APPROVED EQUAL)
15. RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL)
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21. FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).



AMWC CONNECTION SECTION
SCALE: N.T.S.



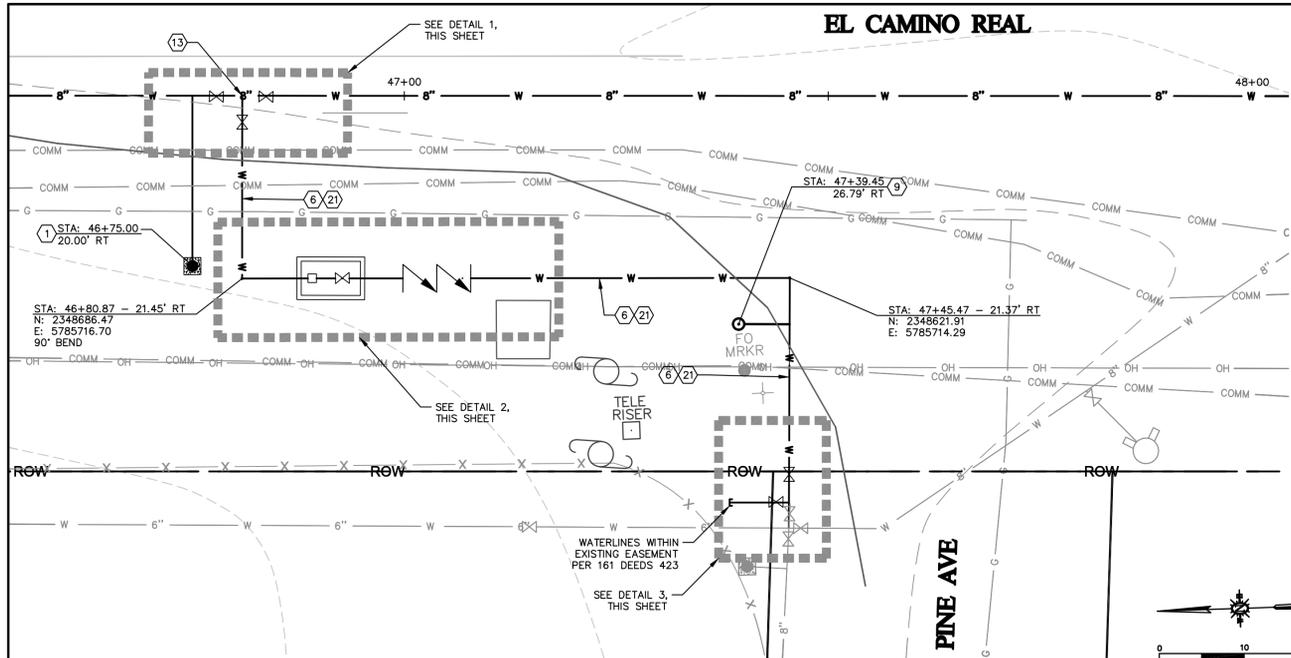
CSA23 INTERTIE IMPROVEMENTS					
DETAIL SHEET					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
JT	JT	2/17/15	JT	2/17/15	CG

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0 1 2 3
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	17	20

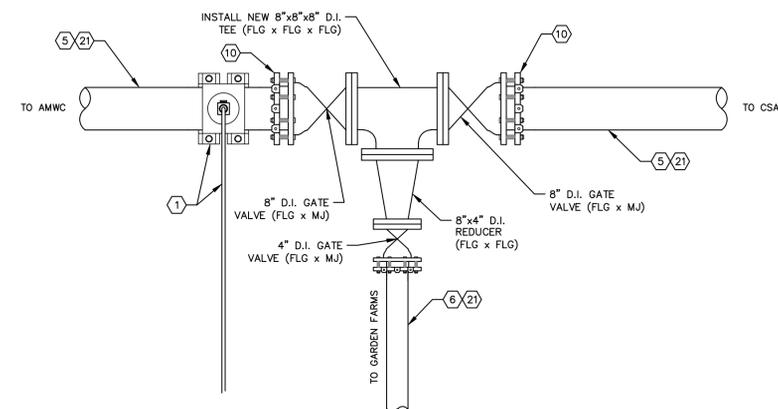
EL CAMINO REAL



GARDEN FARMS CONNECTION – ENLARGEMENT

SCALE HORIZ 1"=10'

EL CAMINO REAL

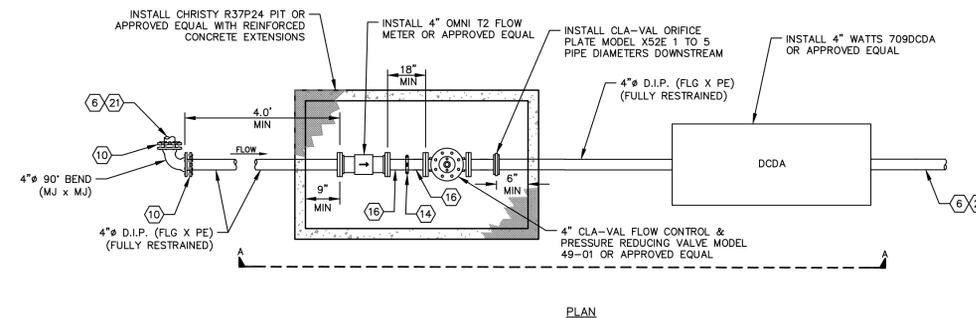


TEE AND GATE VALVE ASSEMBLY DETAIL – STA. 46+80.87

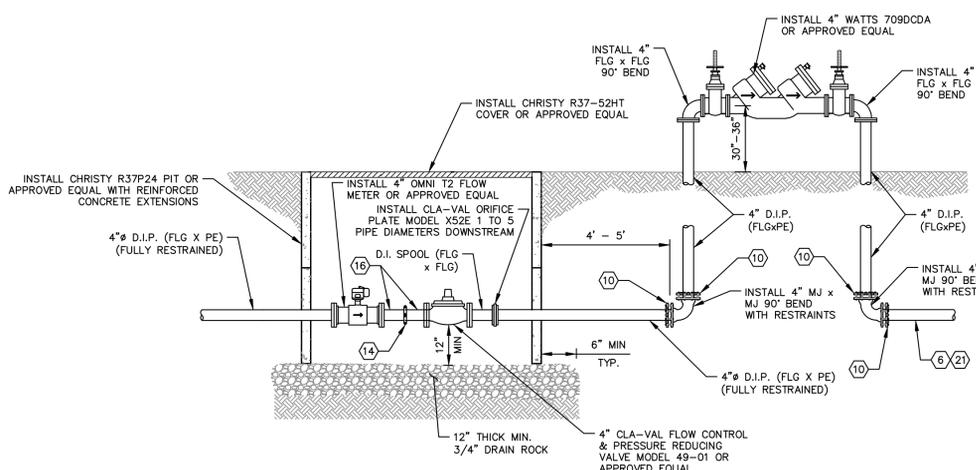
SCALE: N.T.S.

CONSTRUCTION NOTES

1. INSTALL 2" AIR AND VACUUM RELIEF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-6. USE COMBINATION AIR VALVE APOO 140C OR APPROVED EQUAL.
2. INSTALL 2" BLOW-OFF ASSEMBLY PER SLO COUNTY STANDARD DETAIL W-5a.
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4. INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
5. INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
6. INSTALL 4" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4a. SEE GENERAL NOTE #11.
7. INSTALL 18" Ø, 1/8" MIN THICK STEEL CASING, LENGTH PER PLAN/PROFILE, CENTERED UNDER CROSSING STRUCTURES. SEE DETAIL 7, SHEET 19 FOR CASING AND SPACER DETAIL.
8. INSTALL PUMP-OUT PER DETAIL 3, SHEET 19.
9. INSTALL PUMP-OUT PER DETAIL 4, SHEET 19.
10. FULLY RESTRAINED MECHANICAL JOINT (EBAA SERIES 2000PV FOR PVC, SERIES 1100 FOR DI, OR APPROVED EQUAL).
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13. INSTALL 8" TEE AND GATE VALVE ASSEMBLY PER DETAIL 1, SHEET 17.
14. GROOVED COUPLING (VICTAULIC STYLE 31 OR APPROVED EQUAL).
15. RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL).
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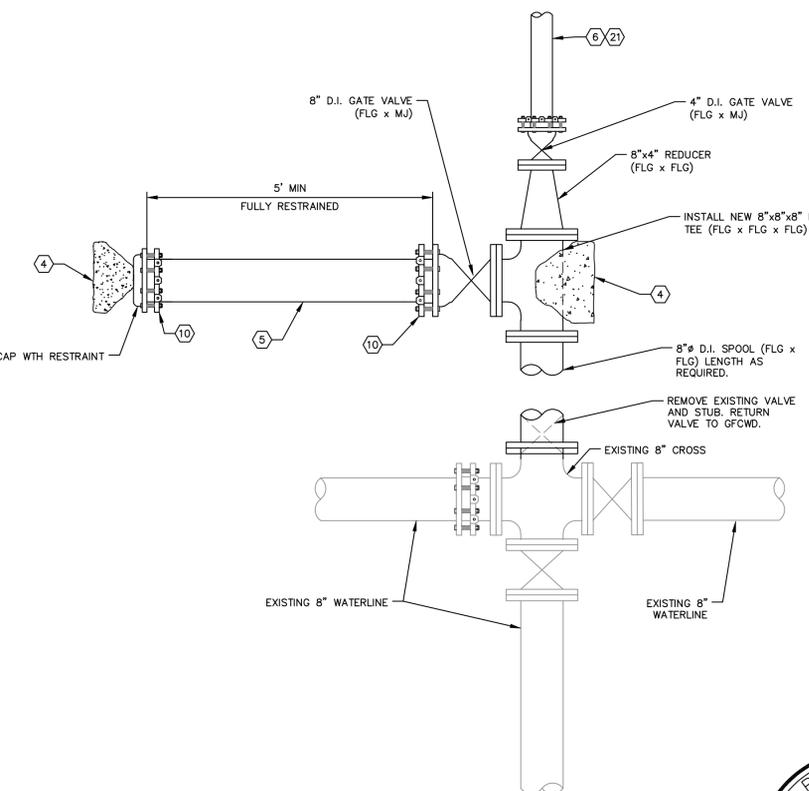
PLAN



SECTION A-A

GARDEN FARMS CONNECTION DETAIL

N.T.S.



GARDEN FARMS POINT OF CONNECTION DETAIL

SCALE: N.T.S.



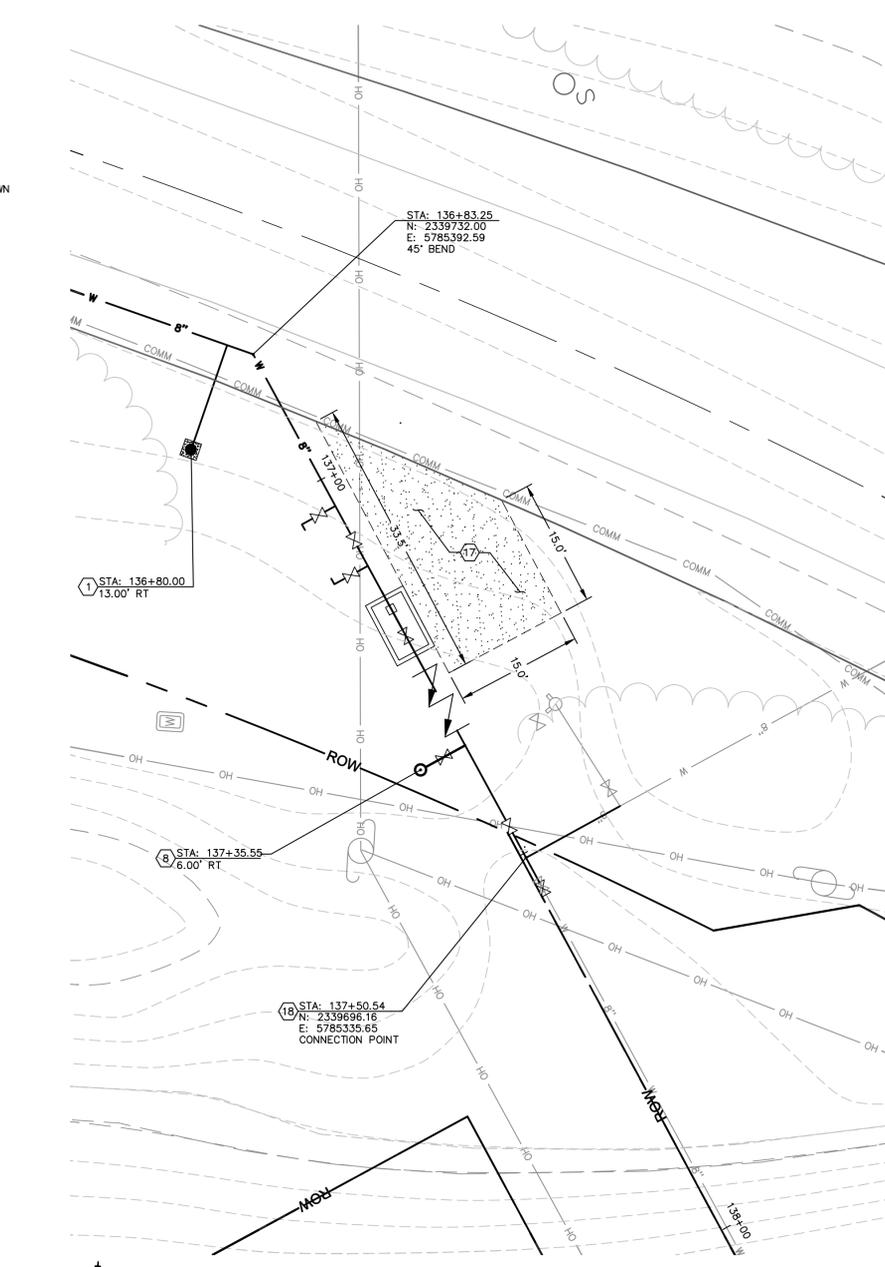
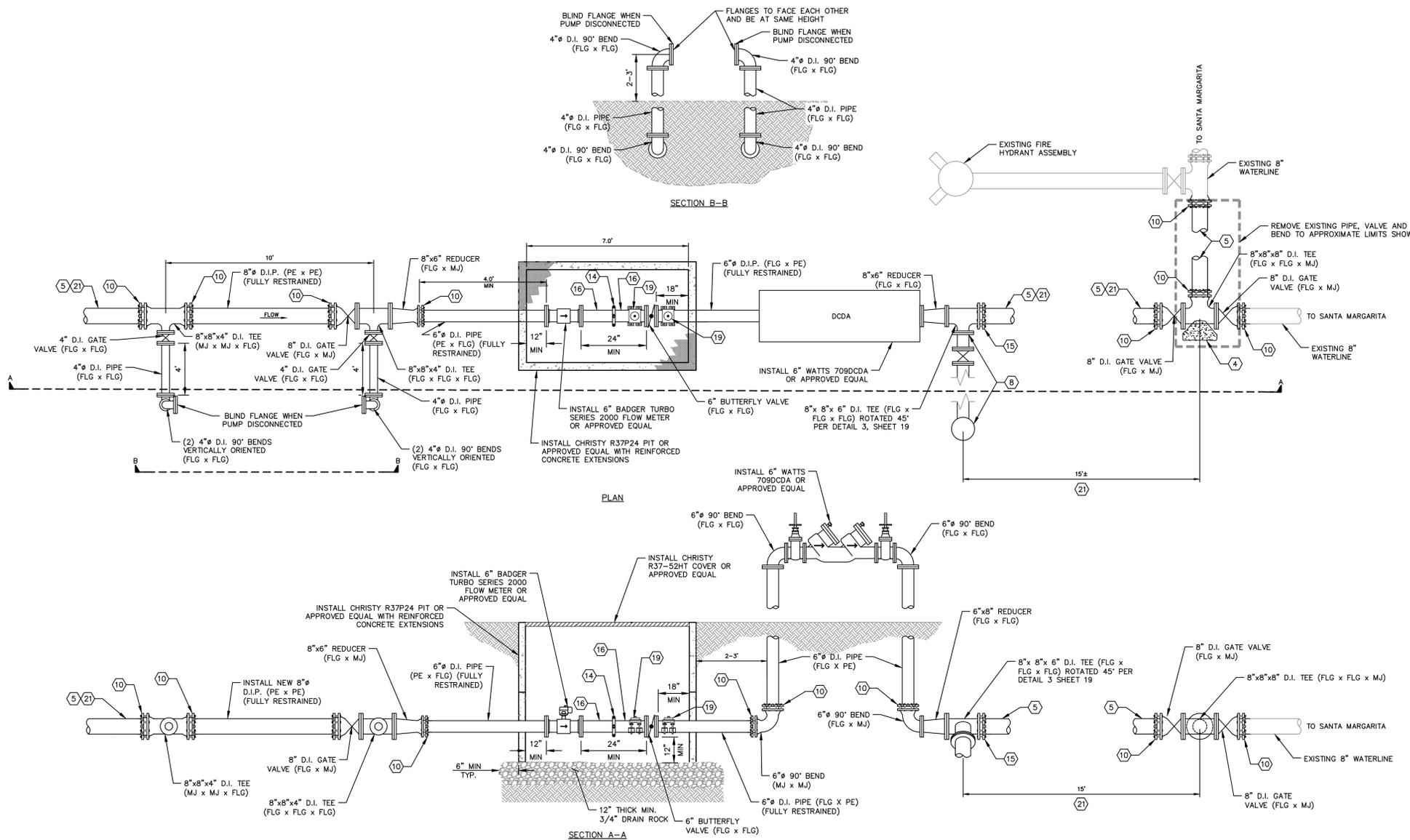
**CSA23 INTERTIE IMPROVEMENTS
DETAIL SHEET
SAN LUIS OBISPO COUNTY, CA.**

Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
	JT	2/17/15	JT	2/17/15	CG	2/17/15

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0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 3

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
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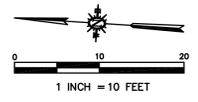


CONSTRUCTION NOTES

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- 4) INSTALL CONCRETE THRUST BLOCK PER SLO COUNTY STANDARD DETAIL W-1. CONTRACTOR TO SUBMIT CALCULATIONS.
- 5) INSTALL 8" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER SLO COUNTY STANDARD DETAIL U-4 & U-4g. SEE GENERAL NOTE #11.
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- 15) RESTRAINED FLANGE ADAPTER (EBAA SERIES 2100 OR APPROVED EQUAL).
- 16) D.I. SPOOL WITH GROOVE (FLG x PE).
- 17) INSTALL 6" THICK DECOMPOSED GRANITE.
- 18) CONNECT TO EXISTING 8" WATER MAIN PER CONNECTION DETAIL 4, SHEET 18.
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- 20) INSTALL 10" C900, DR18 PVC WATER MAIN IN OPEN TRENCH PER AMWC STANDARD DETAIL 201. SEE GENERAL NOTE #11.
- 21) FULLY RESTRAIN PVC PIPE TO LIMITS SHOWN USING BELL RESTRAINT HARNESS (EBAA IRON SERIES 1600, OR APPROVED EQUAL).

CSA 23 CONNECTION DETAIL
N.T.S.

CSA 23 CONNECTION - ENLARGEMENT
SCALE HORIZ 1"=10'

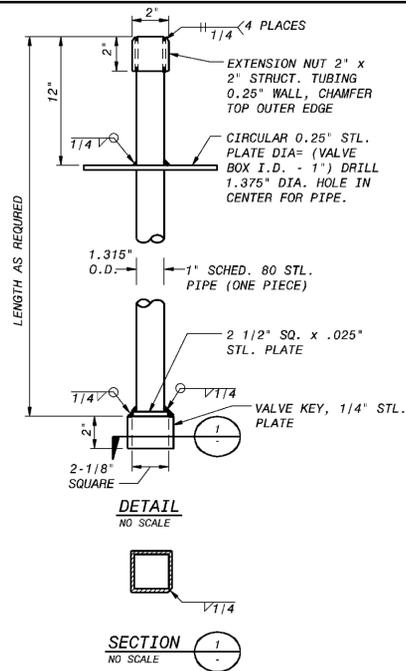


CSA23 INTERTIE IMPROVEMENTS					
DETAIL SHEET					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
	JT	2/17/15	JT	2/17/15	CG

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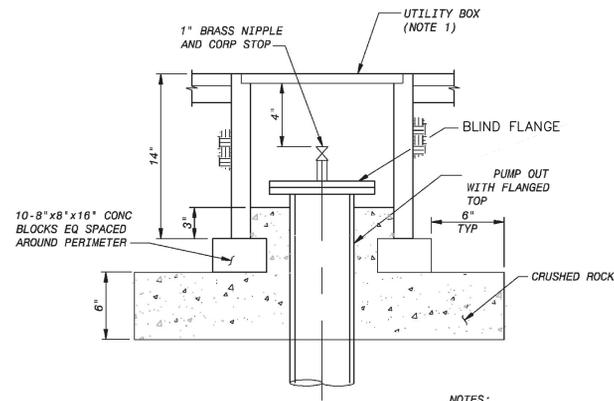
0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 1 2 3

ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	19	20



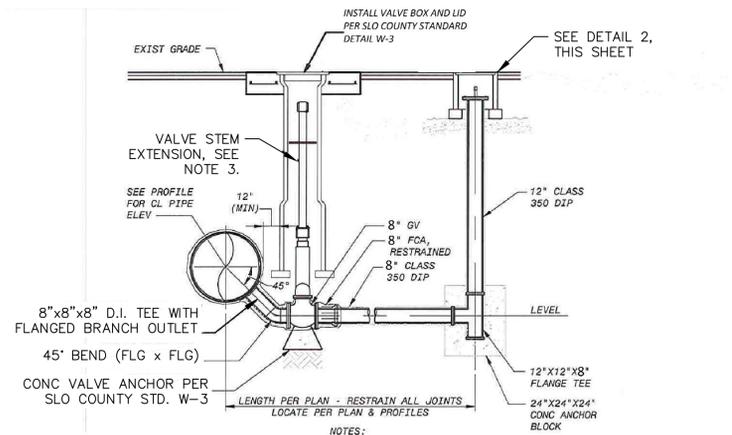
- NOTES:**
- LENGTH OF EXTENSION IN INCHES SHALL BE INSCRIBED WITH AN ARC WELD BEAD (MIN. OF 2" IN HEIGHT) ON TOP FACE OF CIRCULAR PLATE.
 - VALVE KEY SHALL FIT OVER STANDARD 2" VALVE OPERATING NUT.
 - EXTENSION NUT AND VALVE KEY TO BE IN ALIGNMENT WITH EACH OTHER.

VALVE STEM EXTENSION
N.T.S. (1)



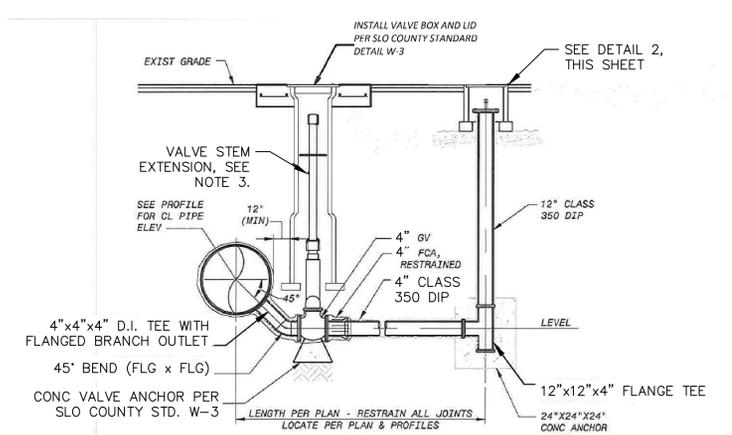
- NOTES:**
- UTILITY BOX SHALL BE 24"x36" PRECAST CONCRETE BOX CHRISTY OR EQUAL.

PUMP OUT DISCHARGE PIPE
N.T.S. (2)



- NOTES:**
- WAX TAPE COAT ALL FLANGES, NUTS, AND BOLTS. APPLY POLYETHYLENE SHEET ENCASUREMENT.
 - WRAP ALL DUCTILE IRON PIPE WITH POLYETHYLENE ENCASUREMENT PER SPECIFICATIONS.
 - PROVIDE VALVE STEM EXTENSION WHEN DEPTH TO OPERATING NUT EXCEEDS 48". FABRICATE EXTENSION TO FIELD MEASUREMENT AND PER DETAIL 1, THIS SHEET.

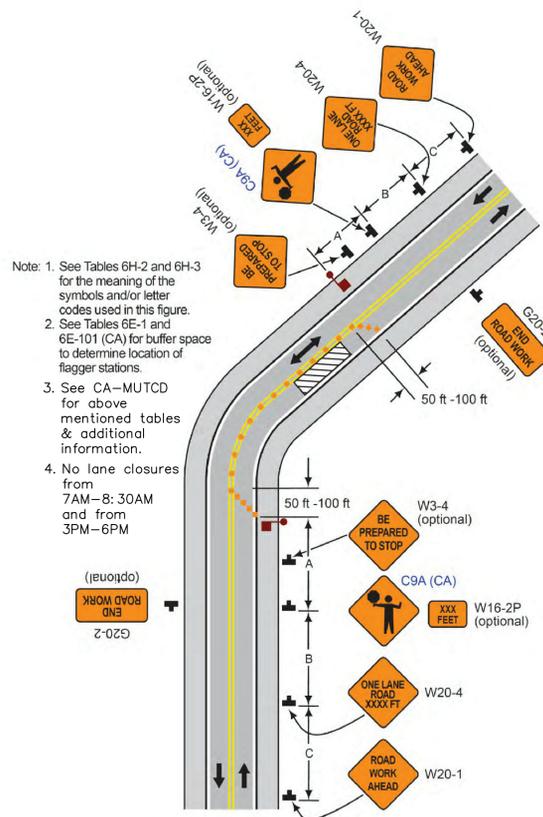
PUMP OUT
N.T.S. (3)



- NOTES:**
- WAX TAPE COAT ALL FLANGES, NUTS, AND BOLTS. APPLY POLYETHYLENE SHEET ENCASUREMENT.
 - WRAP ALL DUCTILE IRON PIPE WITH POLYETHYLENE ENCASUREMENT PER SPECIFICATIONS.
 - PROVIDE VALVE STEM EXTENSION WHEN DEPTH TO OPERATING NUT EXCEEDS 48". FABRICATE EXTENSION TO FIELD MEASUREMENT AND PER DETAIL 1, THIS SHEET.

PUMP OUT
N.T.S. (4)

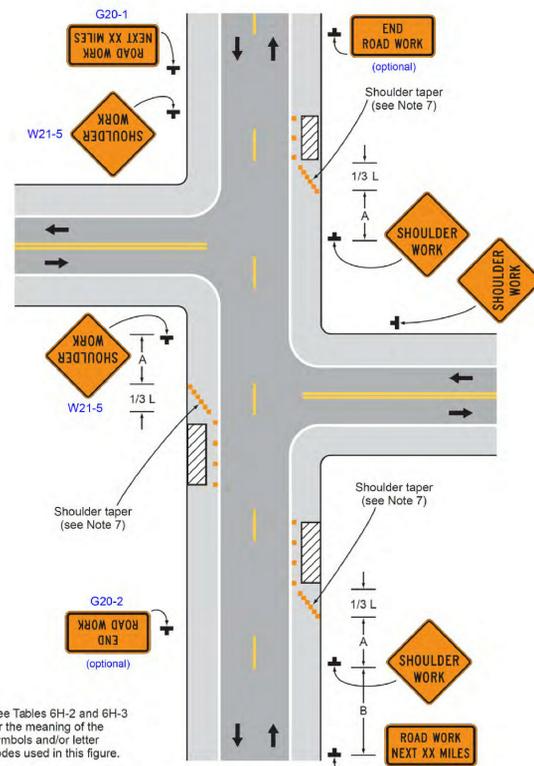
Figure 6H-10 (CA). Lane Closure on Two-Lane Road Using Flaggers (TA-10)



- Note:**
- See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.
 - See Tables 6E-1 and 6E-101 (CA) for buffer space to determine location of flagger stations.
 - See CA-MUTCD for above mentioned tables & additional information.
 - No lane closures from 7AM-8:30AM and from 3PM-6PM

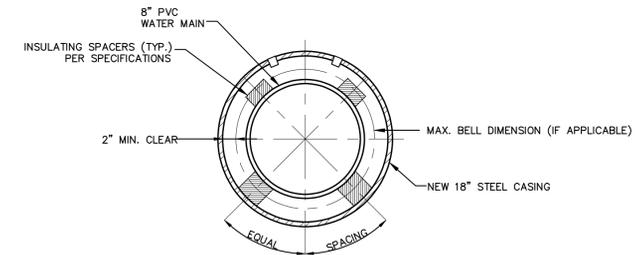
Typical Application 10
LANE CLOSURE - TRAFFIC CONTROL
N.T.S. (5)

Figure 6H-3. Work on the Shoulders (TA-3)



- Note:** See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure. Refer to CA-MUTCD for tables & additional information.

Typical Application 3
SHOULDER WORK - TRAFFIC CONTROL
N.T.S. (6)



- PLACE WARNING TAPE (SEE SPECIFICATIONS) ON PIPE PRIOR TO ATTACHING INSULATING SPACERS.
 - SPACERS SHALL BE 12 INCHES IN WIDTH AND OF SUFFICIENT HEIGHT TO PROVIDE A MINIMUM OF 2 INCH CLEARANCE AT THE BELL AND A MAXIMUM OF 2" CLEARANCE BETWEEN SPACER AND INSIDE TOP OF CASING. ALL SPACERS SHALL BE EQUAL DIMENSIONS AND POSITIONED UNIFORMLY.
 - SPACERS SHALL BE ATTACHED IN PLACE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - MINIMUM NUMBER OF SPACERS PER SPACER ASSEMBLY AND MINIMUM NUMBER OF SPACER ASSEMBLIES PER JOINT OF PIPE.
- | CARRIER PIPE SIZE (INCHES) | NUMBER OF SPACERS PER SPACER ASSEMBLY | WIDTH OF SPACER ASSEMBLY (MIN.) | NUMBER OF SPACER ASSEMBLIES PER LENGTH OF PIPE |
|----------------------------|---------------------------------------|---------------------------------|--|
| 12" | 4 | 12-INCHES | 3 |
- END SEALS SHALL BE PLACED AT THE ENDS OF EACH CASING SECTION.
 - CASING SHALL BE INSTALLED SUCH THAT THE WATER MAIN SHALL MAINTAIN THE SLOPE AND GRADES AS SHOWN ON THE PROFILE (WITH THE CASING SPACERS INSTALLED).
 - ALL STEEL CASING PIPE FIELD JOINTS SHALL BE WELDED FULL CIRCUMFERENCE.
 - MINIMUM WALL THICKNESS OF STEEL CASING SHALL BE 3/8-INCH. CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATION OF ACTUAL CASING WALL THICKNESSES AND STRENGTH NEEDED TO MATCH EQUIPMENT TO BE USED BY CONTRACTOR.

PIPE CASING DETAIL
SHEET 11, 13 N.T.S. (7)



CSA23 INTERTIE IMPROVEMENTS					
DETAIL SHEET					
SAN LUIS OBISPO COUNTY, CA.					
Check By	Designer	Date	Drawn By	Date	Design Engineer
	JT	2/17/15	JT	2/17/15	CG

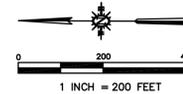
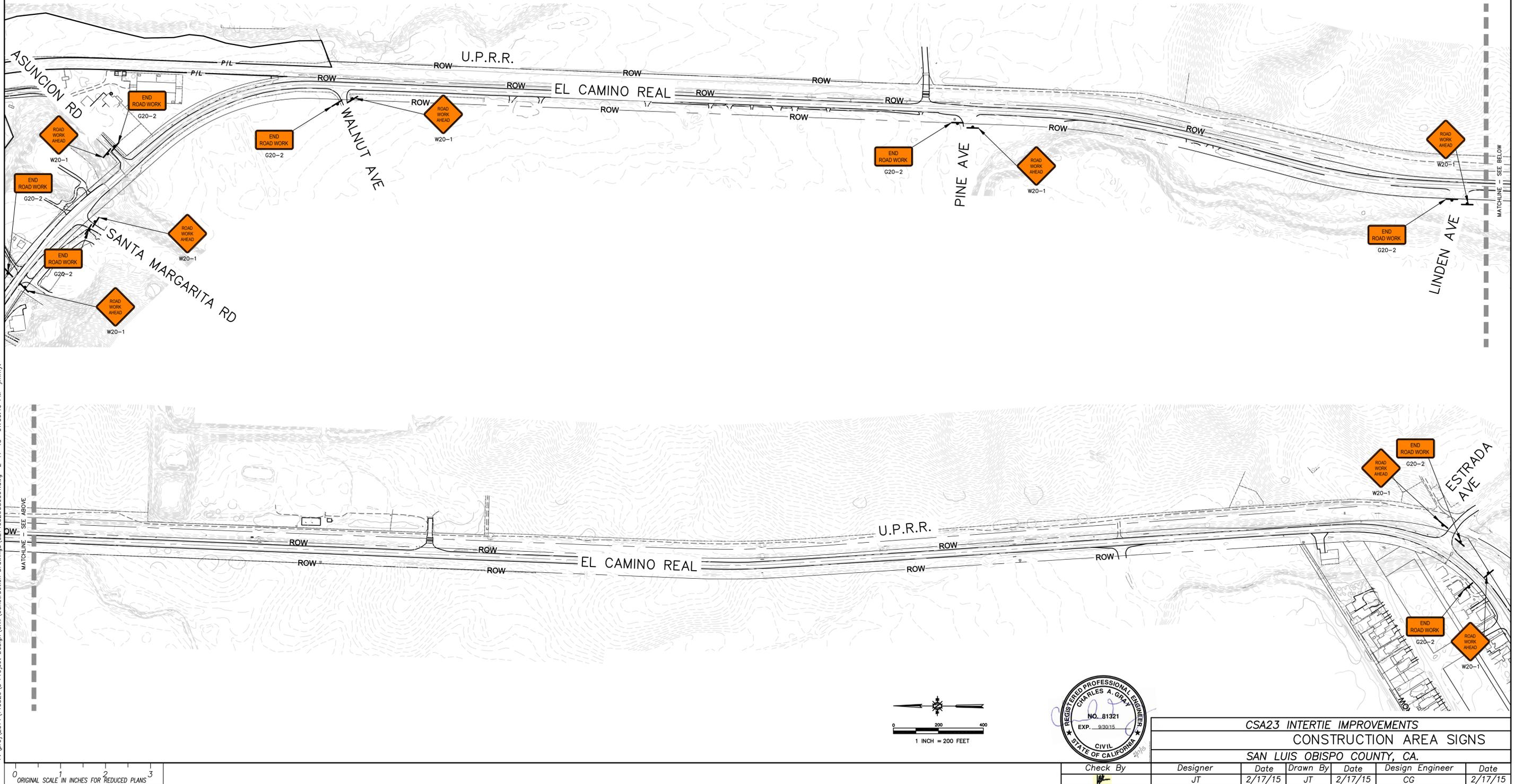
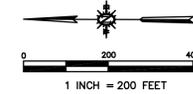
ROAD NO.	JOB NO.	SHEET NO.	TOTAL SHEETS
3120	300536	20	20

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN	PANEL SIZE (in x in)	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS (EA)
 W20-1	36 x 36	ROAD WORK AHEAD	1 - 4 x 4	8
 G20-2	36 x 18	END ROAD WORK	1 - 4 x 4	8

NOTES:

- EXACT LOCATION OF SIGNS TO BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH PART 6 OF THE 2014 CALIFORNIA MUTCD.
- ALL SIGNS SHALL BE STATIONARY MOUNTED.
- ALL SIGNS SHOWN SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION OR AS DETERMINED BY THE ENGINEER.



CSA23 INTERTIE IMPROVEMENTS						
CONSTRUCTION AREA SIGNS						
SAN LUIS OBISPO COUNTY, CA.						
Check By	Designer	Date	Drawn By	Date	Design Engineer	Date
	JT	2/17/15	JT	2/17/15	CG	2/17/15

F:\proj\2014\40520\3 Project Design\Civil\Construction Drawings\CEI\40520\0001.dwg 2-17-15 01:06:19 PM jimmyt

0 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 1 2 3